



LTCC RF Components

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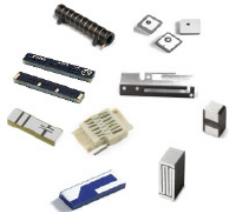
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Wireless PBU Product Overview

Pulse Antennas cover all of the bases. We offer antennas for IOT (Internet Of Things), DAS Antenna Products, Public Safety/LMR, Navigation GPS Products, Smallcell Antennas, WLAN Antenna Products, LTE Antenna Products, NFC Antenna Products and even Utility/Smart Grid antennas.

Antenna's of Everything

			
Embedded Antennas (Ceramic, Helical, FPC, Stamped) Embedded ceramic chip and patch, composite, Helical, FPC and Stamp metal antennas for effective miniaturization and simplicity	3D Antennas (LDS, LAP, FluidANT) Get Inspired of 3D Shapes by using LDS, LAP & FluidANT antenna design and manufacturing process.	Internal Antennas (FPC, PCB, NFC, WPC, LCP Antennas) Embedded ceramic chip and patch, composite, Helical, FPC and Stamp metal antennas for effective miniaturization and simplicity	External/ In-Building Antennas Reliable blade/ stick antennas for routers & gateways. Cutting edge design and performance proven DAS antennas for in-building wireless and public-safety.

			
IPD RF Components - LTCC (Ceramic, Helical, FPC, Stamped) Embedded ceramic chip and patch, composite, Helical, FPC and Stamp metal antennas for effective miniaturization and simplicity	Outdoor Antennas Weather proof portable and fixed outdoor antennas for portable radio and data collecting purposes.	Vehicular Antennas Extensive ruggedized, tamper-proof and aesthetically pleasing legacy Larsen and multiband antennas for public safety, transportation, and other applications.	Cable & Mounting Solutions Support NMO and various mounting types with custom cable types and connector selections.

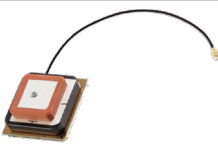
Introduction

Based on a Low Temperature Co-Fired Ceramic (LTCC) process, Pulse produces a diverse range of RF components including BPF, LPF, Balun, Diplexer, Triplexer and Antennas.

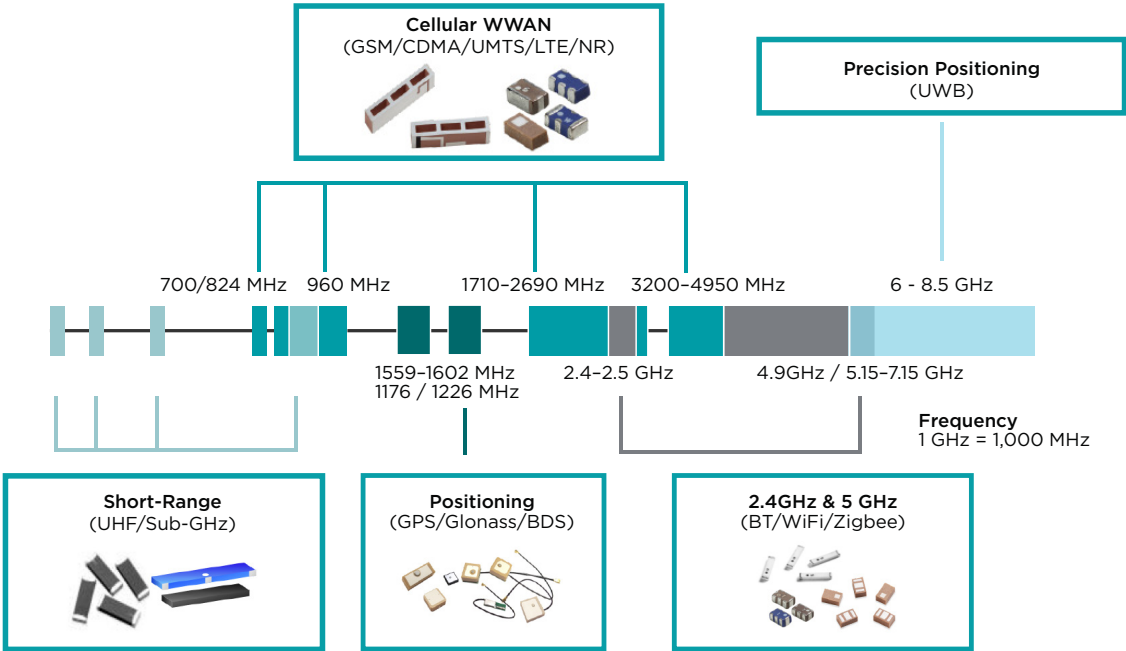
Our LTCC RF components cover a wide variety of wireless communication protocols, including Bluetooth & IEEE 802.11 a/b/g/n/ac/ax, WPAN (Wireless Personal Area Network), WLAN (Wireless Local Area Network), WMAN (Wireless Metropolitan Area Network), WWAN(Wireless Wide Area Network), LTE (Long Term Evolution) and 5G NR.

Product Portfolio

RF Component (Filter/Balun/Coupler/Diplexer, LTCC IPD)					
					
BPF, LPF	Balun	Diplexer/ Triplexer	Balanced BPF	Coupler	High-Q Chip Inductor

Ceramic Antenna		
		
Chip Antenna	Patch Antenna	Active Antenna

Working Frequency and Product Mapping



Portable devices, home appliances, industrial/medical equipment will be equipped with wireless connectivity for Peer-to-Peer data exchange. More wireless components are needed.



Key features of wireless components

Compact

- Maximize performance with the smallest size required

Multi-Band & High Efficiency

- WWAN: Quad-band (850/900/1800/1900 MHz) to Penta-band (850/900/1800/1900/2100 MHz)
- Support 4G cellular network LTE 700 MHz (Band 12,13,17), 2300/2600 MHz
- Multi-band 2.3/2.4/2.7 & 5 GHz supporting WLAN/WiMAX/LTE
- Operating in navigational systems Beidou, GPS & Glonass: 1561 - 1606 MHz

High Reliability

- Operating temperature range: -40°C ~ 105°C
- Operating humidity 95% RH at 40°C
- Vibration verification

Easy Installation

- Reliable adhesive tape, surface mount, and flexible cable/connector selection

Filter (BPF)

Model	Part No./ Description	Electrical Data	Mechanical Data
	BPF1608LM02R1880A 1608 PCS/DCS RX BPF Type02	Freq. Range: 1805-2025 MHz Insertion Loss: 1.5dB (Max) VSWR*: 2.0 dB(Max)	Attenuation: 30dB Min @ 700-950 MHz 30dB Min @ 950-1050 MHz 30dB Min @ 2400-2500 MHz 30dB Min @ 2700-5150 MHz 30dB Min @ 5150-5850 MHz Size (mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	BPF2012LL03R2400A 2012 2.4G BPF Type03	Freq. Range: 2400-2500MHz Insertion Loss: 2.3dB(Max) VSWR*: 2.0 dB(Max)	Attenuation: 40dB Min @ 1000-1600MHz 40dB Min @ 4900MHz 25dB Min @ 7500MHz Size (mm): 2.0*1.25*1.0 Operating Temp.: -40-85°C RoHS Compliance
	BPF1608LM02R2400A 1608 2.4G BPF Type02	Freq. Range: 2400-2500 MHz Insertion Loss: 1.7 dB (Max) VSWR*: 2.0 dB(Max)	Attenuation: 30dB Min @ 880-960 MHz 20dB Min @ 1710-1990 MHz 8.5dB Min@ 2170 MHz 20dB Min @ 4800-5000 MHz 25dB Min @ 7200-7500 MHz Size (mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	BPF1005LM03R2400A 1005 2.4G BPF Type03, L.L.	Freq. Range: 2400-2500MHz Insertion Loss: 1.5 dB(Max) VSWR*: 2.0 dB(Max)	Attenuation: 10dB Min@ 880 ~ 960MHz 25dB Min@ 4800 ~ 5000MHz 25dB Min@ 7200 ~ 7500MHz Size (mm): 1.0*0.5*0.35 Operating Temp.: -40-85°C RoHS Compliance
	BPF1109LRPJ2400L 1109 2.4G BPF TypePJ	Freq. Range: 2400-2500 MHz Insertion Loss: 1.2dB (Max) VSWR*: 1.5 (Max)	Attenuation 20 dB Min@ 50 ~ 960 MHz 30 dB Min@ 1560 ~ 1606 MHz 15 dB Min@ 1710 ~ 1990 MHz 10 dB Min@ 3600 MHz 35 dB Min@ 4800 ~ 5000 MHz 25 dB Min@ 7200 ~ 7500 MHz Size(mm): 1.1*0.9*0.6 Operating Temp.: -40 ~ 105°C RoHS Compliance
	BPF1411LRPH2400L 1411 2.4G BPF TypePH	Freq. Range: 2400-2500 MHz Insertion Loss: 1.1dB (Max) VSWR*: 1.5 (Max)	Attenuation 20 dB Min@ 50 ~ 960 MHz 10 dB Min@ 1710 ~ 1990 MHz 15 dB Min@ 3600 MHz 25 dB Min@ 4800 ~ 7200 MHz Size(mm): 1.4*1.2*0.5 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BPF1608LM11R2400A 1608 2.4G BPF Type11	Freq. Range: 2400-2500 MHz Insertion Loss: 1.8dB (Max) VSWR*: 2.0 (Max)	Attenuation 20 dB (Min.) @1710-1990 MHz 6.5 dB (Min.) @2110-2170 MHz 25 dB (Min.) @4800-5000 MHz 20 dB (Min.) @7200-7500 MHz Size(mm): 1.56*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BPF1608LRAS2400L 1608 2.4G BPF TypeAS	Freq. Range: 2400-2500 MHz Insertion Loss: 1.5dB (Max) VSWR*: 2.0 (Max)	Attenuation 30 dB (Min.) @800-960 MHz 34 dB (Min.) @4800-5000 MHz 34 dB (Min.) @7200-7500 MHz Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BPF2012LL01R5000A 2012 5G BPF Type01	Freq. Range: 4900-5950 MHz Insertion Loss: 1.5dB (Max) VSWR*: 2.0 (Max)	Attenuation: 30dB Min @1280-3000MHz 25dBMin @ 3300-4000MHz 25dBMin @ 9800-11900MHz Size (mm): 2.0*1.2*1 Operating Temp.: -40-85°C RoHS Compliance
	BPF1608LM08R5000A 1608 5.0G BPF Type08	Freq. Range: 4900-5840MHz Insertion Loss: 1.5dB(Max) VSWR*: 2.0 (Max)	Attenuation: 35dB Min @ 500-2170MHz 35dB Min @ 2170-2500MHz 30dB Min @ 9800-12000MHz Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	BPF1608LM06R5000A 1608 5G BPF Type06	Freq. Range: 5150-5950 MHz Insertion Loss: 0.6 dB (Max) VSWR*: 2.0 dB(Max)	Attenuation: 35dB Min @ 2400 ~ 2500 MHz 30dB Min @ 10300 ~ 11700 MHz 25dB Min @ 15450 ~ 17850 MHz Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	BPF1608LM09R5000A 1608 5G BPF Type09	Freq. Range: 4900-5850 MHz Insertion Loss: 1.5 dB (Max) VSWR*: 2.0dB (Max)	Attenuation: 33dB Min @ 500 ~ 2170 MHz 29dB Min @ 2170 ~ 2500 MHz 32dB Min @ 9800 ~ 12000 MHz Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance

Filter (BPF)				
Model	Part No./ Description	Electrical Data		Mechanical Data
	BPF1608LM10R5000A 1608 5G BPF Type10	Freq. Range: 4900 ~ 5950 MHz Insertion Loss: 1.3 dB (Max) VSWR*: 2.0 dB(Max)	Attenuation: 38dB Min @ 30 ~ 2700 MHz 16dB Min @ 3453 ~ 3547 MHz 33dB Min @ 3667 ~ 3883 MHz 9dB Min @ 6900 ~ 7093 MHz 32dB Min @ 7333 ~ 7750 MHz 40dB Min @ 10600 ~ 11650 MHz 18dB Min @ 15540 ~ 17760 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40~85°C RoHS Compliance
	BPF1608LKP5R5000A 1608 5G BPF TypeP5	Freq. Range: 5150-5950 MHz Insertion Loss: 0.8 dB (Max) VSWR*: 1.7 (Max)	Attenuation 35dB Min @ 2400 ~ 2500 MHz 30dB Min @ 10300 ~ 11900 MHz 25dB Min @ 15450 ~ 21750 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BPF1608LKPZR5000L 1608 5GHz BPF TypePZ	Freq. Range: 4900-5950 MHz Insertion Loss: 1.0 dB (Max) VSWR*: 1.5 (Max)	Attenuation 38dB Min.@ 30-2700 MHz 16dB Min.@ 3453-3547 MHz 33dB Min.@ 3677-3883 MHz 10dB Min.@ 6900-7093 MHz 32dB Min.@ 7333-7750 MHz 34dB Min.@ 10600-11650 MHz 20dB Min.@ 15540-17700 MHz	Size(mm): 1.6*0.8*0.65 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BPF1608LKPUR5000L 1608 5G BPF TypePU	Freq. Range: 5150-5950 MHz Insertion Loss: 0.8 dB (Max) VSWR*: 1.7 (Max)	Attenuation 35 dB Min @ 2400 ~ 2500 MHz 30 dB Min @ 10300 ~ 11900 MHz 25 dB Min @ 15450 ~ 17850 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BPF1608LM15R6000A 1608 5-7G BPF Type15	Freq. Range: 5170-7125 MHz Insertion Loss: 0.7 dB(Max) VSWR*: 2.0 dB(Max)	Attenuation: 30dB Min @ 500-2500 MHz 25dB Min @ 2500-2690 MHz 10dB Min @ 3400-3800 MHz 27dB Min @ 10340-14250 MHz 20dB Min @ 15510-19500 MHz 15dB Min @ 19500-21375 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40~85°C RoHS Compliance
	BPF2012LKPLR3750L 2012 n77 BPF TypePL	Freq. Range: 3300-4200 MHz Insertion Loss: 1.6 dB (Max) VSWR*: 2.0 (Max)	Attenuation 38dB Min.@ 450-2200 MHz 38dB Min.@ 2300-2483 MHz 30dB Min.@ 2496-2690 MHz 20dB Min.@ 5150-5850 MHz 30dB Min.@ 6600-8400 MHz 20dB Min.@ 9900-12600 MHz 15dB Min.@ 13200-16800 MHz	Size(mm): 2.01*1.25*0.65 Operating Temp.: -55 ~ 125°C RoHS Compliance
	BPF1608LRPFR3750L 1608 n77 BPF TypePF	Freq. Range: 3300-4200 MHz Insertion Loss: 2.5 dB (Max) VSWR*: 1.5 (Max)	Attenuation 30dB Min.@ 100-2570 MHz 25dB Min.@ 2620-2690 MHz 15dB Min.@ 5150-5925 MHz 25dB Min.@ 6600-8400 MHz 25dB Min.@ ref 9900-12600 MHz	Size(mm): 1.6*0.8*0.35 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BPF1005LRPPR3750L 1005 n77 BPF TypePP	Freq. Range: 3300-4200 MHz Insertion Loss: 1.6 dB (Max) VSWR*: 1.5 (Max)	Attenuation 40dB Min.@ 600-1610 MHz 45dB Min.@ 1710-1785 MHz 30dB Min.@ 1805-2200 MHz 25dB Min.@ 2300-2620 MHz 20dB Min.@ 2620-2690 MHz 20dB Min.@ 5150-5850 MHz 20dB Min.@ 5850-6600 MHz 20dB Min.@ 6600-7600 MHz 20dB Min.@ 7600-8400 MHz 10dB Min.@ 9900-12600 MHz 10dB Min.@ ref 13200-18000 MHz	Size(mm): 1.0*0.5*0.38 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BPF2012LKPMR4700L 2012 n79 BPF TypePM	Freq. Range: 4400-5000 MHz Insertion Loss: 0.9 dB (Max) VSWR*: 2.0 (Max)	Attenuation 30dB Min.@ 500-2690 MHz 15dB Min.@ 2700-3800 MHz 15dB Min.@ 8800-10000 MHz 15dB Min.@ 13200-15000 MHz	Size(mm): 2.0*1.25*0.65 Operating Temp.: -40 ~ 85°C RoHS Compliance

Filter (BPF)

Model	Part No./ Description	Electrical Data		Mechanical Data
	BPF1608LRAAR4700L 1608 n79 BPF TypeAA	Freq. Range: 4400-5000 MHz Insertion Loss: 1.9 dB (Max) VSWR*: 2.0 (Max)	Attenuation 35dB Min.@ 400-915 MHz 30dB Min.@ 925-2485 MHz 20dB Min.@ 2485-3600 MHz 7dB Min.@ 5850-6100 MHz 15dB Min.@ 6100-6890 MHz 25dB Min.@ 8800-10000 MHz 20dB Min.@ ref 13200-15000 MHz	Size(mm): 1.6*0.8*0.35 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BPF1005LRPQR4700L 1005 n79 BPF TypePQ	Freq. Range: 4400-5000 MHz Insertion Loss: 2.5 dB (Max) VSWR*: 1.5 (Max)	Attenuation 30dB Min.@ 600-960 MHz 33dB Min.@ 1164-1300 MHz 30dB Min.@ 1476-1511 MHz 30dB Min.@ 1559-1610 MHz 30dB Min.@ 1805-2200 MHz 37dB Min.@ 2300-2690 MHz 25dB Min.@ 3055-3490 MHz 15dB Min.@ 3490-3600 MHz 3 dB Min.@ 5490-5670 MHz 6 dB Min.@ 5670-5875 MHz 7 dB Min.@ 5875-6100 MHz 15dB Min.@ 6100-6980 MHz 25dB Min.@ 8800-10000 MHz 15dB Min.@ ref 13200-15000 MHz	Size(mm): 1.0*0.5*0.32 Operating Temp.: -40 ~ 85°C RoHS Compliance

Filter (LPF)

Model	Part No./ Description	Electrical Data		Mechanical Data
	LPF1608LL55R0709A 1608 LTE LPF Type55	Freq. Range: 698-960MHz Insertion Loss: 0.6dB Max @ 698-830MHz 0.7dB Max @ 830-900MHz 0.75dB Max @ 900-915MHz 0.9dB Max @ 915-960MHz VSWR*: 2.0dB (Max)	Attenuation: 30dB Min @ 1554-1830MHz 35dB Min @ 2097-2745MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	LPF1608LL60R0709A 1608 0.7-0.9GHz LPF Type60	Freq. Range: 698-960 MHz Insertion Loss: 0.6(Max) VSWR*: 2.0dB(Max)	Attenuation: 13dB Min @ 1554-1610MHz 35dB Min @ 1805-1830MHz 35dB Min @ 2110-2170MHz 30dB Min @ 1710-2700MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	LPF1608LRR2R0709L 1608 0.7-0.96GHz LPF TypeR2	Freq. Range: 690 ~ 960 MHz Insertion Loss: 1.1 dB (Max) VSWR*: 2.0 (Max) Impedance: 50Ω	Attenuation 20dB Min @ 1350 ~ 1920 MHz 48dB Min @ 2070 ~ 2880 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHS Compliance
	LPF1005LM55R0709A 1005 0.7-0.96GHz LPF T55	Freq. Range: 698 ~ 960 MHz Insertion Loss: 0.7 dB (Max) VSWR*: 2.0dB (Max)	Attenuation: 13dB Min @ 1554 ~ 1610 MHz 35dB Min @ 1805 ~ 1830 MHz 35dB Min @ 2110 ~ 2170 MHz 30dB Min @ 1710 ~ 2700 MHz	Size(mm): 1.0*0.5*0.35 Operating Temp.: -40-85°C RoHS Compliance
	LPF1005LM51R0780A 1005 787MHz LPF Type51	Freq. Range: 746-787 MHz Insertion Loss: 0.7 dB (Max) VSWR*: 2.0dB(Max)	Attenuation: 30dB Min @ 1554-1610 MHz 25dB Min @ 2238-2361 MHz	Size(mm): 1.0*0.5*0.35 Operating Temp.: -40-85°C RoHS Compliance
	LPF1005LM53R1880A 1005 PCS/DCS RX LPF Type53	Freq. Range: 1880-2025 MHz Insertion Loss: 1.3 dB (Max) VSWR*: 2.0dB (Max)	Attenuation: 20dB Min @ 2400-2500 MHz 25dB Min @ 5150-5850 MHz 25dB Min @ 3760-4050 MHz 25dB Min @ 5640-6075 MHz	Size(mm): 1.0*0.5*0.35 Operating Temp.: -40-85°C RoHS Compliance
	LPF1005LM58R1880A 1005 1.71-2.025GHz LPF Type58	Freq. Range: 1710 ~ 2025 MHz Insertion Loss: 0.65 dB (Max) VSWR*: 1.7 (Max) Impedance: 50Ω	Attenuation 22 dB Min@ 3420 ~ 3820 MHz 25 dB Min@ 3820 ~ 4050 MHz 25 dB Min@ 5130 ~ 6075 MHz	Size(mm): 1.0*0.5*0.4 Operating Temp.: -40 ~ 85°C RoHS Compliance

LTCC RF Components

Filter (LPF), Filter (Diplexer)

Filter (LPF)

Model	Part No./ Description	Electrical Data		Mechanical Data
	LPF1005LRS2RWPNL 1005 1.695-2.180GHz LPF TypeS2	Freq. Range: 1695 ~ 2180 MHz Insertion Loss: 0.6 dB (Max) VSWR*: 2.0 (Max) Impedance: 50Ω	Attenuation 20 dB Min@ 3350 ~ 4360 MHz 45 dB Min@ 5085 ~ 6540 MHz	Size(mm): 1.0*0.5*0.4 Operating Temp.: -40 ~ 85°C RoHS Compliance
	LPF1005LKRCR6000L 1005 5-7GHz LPF TypeRC Preliminary	Freq. Range: 5170 ~ 7125 MHz Insertion Loss: 0.5 dB (Max) VSWR*: 1.7 (Max) Impedance: 50Ω	Attenuation 10 dB Min@ 10340 ~ 14250 MHz 20 dB Min@ 15510 ~ 21375 MHz	Size(mm): 1.0*0.5*0.4 Operating Temp.: -40 ~ 105°C RoHS Compliance
	LPF1608LL54RWHEXA 1608 LTE LPF Type54	Freq. Range: 699-2690MHz Insertion Loss: 0.25dB(Max) VSWR*: 1.5dB (Max)	Attenuation: 23dB Min @ 5150-5960MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	LPF1608LL56RWHEXA 1608 LTE LPF Type56	Freq. Range: 600-2700MHz Insertion Loss: 0.5dB(Max) VSWR*: 2.0dB (Max)	Attenuation: 30dB Min @ 4800-8000MHz 25dB Min @ 8500-12500MHz	Size(mm): 1.6*0.8*0.65 Operating Temp.: -40-85°C RoHS Compliance
	LPF1608LL57RWHEXA 1608 LTE-Hexa LPF Type57	Freq. Range: 600-2690MHz Insertion Loss: 0.5dB(Max) VSWR*: 2.0dB(Max)	Attenuation: 35dB Min@ 4950 ~ 6000MHz 30dB Min@ 6000 ~ 12500MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	LPF1608LL53R2400A 1608 2.4G LPF Type53	Freq. Range: 2400-2500 MHz Insertion Loss: 0.48dB (Max) VSWR*: 1.5 (Max)	Attenuation: 35dB Min @ 4800-5000 MHz 27dB Min @ 7200-7500 MHz	Size(mm): 1.6*0.8*0.65 Operating Temp.: -40-85°C RoHS Compliance
	LPF1005LM55R2400A 1005 2.4GHz LPF Type55	Freq. Range: 2400 ~ 2500 MHz Insertion Loss: 0.5 dB (Max) VSWR*: 2.0 (Max) Impedance: 50Ω	Attenuation 30 dB Min@ 4800 ~ 5000 MHz 30 dB Min@ 7200 ~ 7500 MHz	Size(mm): 1.0*0.5*0.35 Operating Temp.: -40 ~ 85°C RoHS Compliance
	LPF1005LL50R2400A 1005 2.4G LPF Type50	Freq. Range: 2400-2500MHz Insertion Loss: 0.5dB(Max) VSWR*: 2.0dB(Max)	Attenuation: 25dB Min @ 4800-5000MHz 20dB Min @ 7200-7500MHz	Size(mm): 1.0*0.5*0.35 Operating Temp.: -40-85°C RoHS Compliance
	LPF1608LL52R2500A 1608 Wimax LPF Type52	Freq. Range: 2300-2700MHz Insertion Loss: 1.25dB(Max) VSWR*: 1.5dB(Max)	Attenuation: 35dB Min @ 4800-5390MHz 25dB Min @ 7200-8085MHz	Size(mm): 1.6*0.8*0.65 Operating Temp.: -40-105°C RoHS Compliance
	LPF1005LM52R2500A 1005 2.3-2.7GHz LPF Type52	Freq. Range: 2400-2700 MHz Insertion Loss: 0.7 dB (Max) VSWR*: 2.0dB(Max)	Attenuation: 25dB Min @ 4880-5400 MHz 25dB Min @ 7200-8100 MHz	Size(mm): 1.0*0.5*0.35 Operating Temp.: -40-85°C RoHS Compliance
	LPF1608LL01R5000A 1608 5G LPF Type01	Freq. Range: 4900 ~ 5950 MHz Insertion Loss: 0.7 dB (Max) VSWR*: 2.0dB(Max)	Attenuation: 20dB Min @ 9800 MHz 30dB Min @ 11900 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance

*VSWR depends on the environment

Filter (Diplexer)

Model	Part No./ Description	Electrical Data		Mechanical Data
	DPX1608LM70R0917A 1608 0.9/1.7GHz Diplexer Type70	Freq. Range: 698-960MHz/ 1710-2700 MHz Insertion Loss: Low: 0.8dB(Max) High: 0.7dB(Max) VSWR*: 2.0dB (Max)	Attenuation: Low Band: 25dB (Min).@1710-2700GHz High Band: 20dB (Min).@698-960MHz 20dB (Min).@5150-5850MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance

Filter (Diplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data	
	DPX1608LL88R1524A 1608 1.575/2.4GHz Diplexer Type88	Freq. Range: 1559-1610MHz/ 2400-2500 MHz/ 4900-6000 MHz Insertion Loss: Low: 0.6dB(Typ) High Band: 0.7/ 0.6dB(Typ) VSWR*: 2.0(Max)/ 10.0dB(Min)	Attenuation: Low Band: 18dB(Min).@2400-2500MHz 15dB(Min).@4900-6000MHz High Band: 20dB(Min).@1575-1610MHz	Size(mm): 1.68*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	DPX1608LL87R1524A 1608 1.575/2.4GHz Diplexer Type87	Freq. Range: 1570-1610MHz/ 2400-2500 MHz/4900-6000 MHz Insertion Loss: Low: 0.6dB/ High: 0.7dB/0.6dB VSWR*: 2.0 dB (Max)	Attenuation: Low Band: 15dB(Min) @2400-2500MHz 15dB(Min) @4900-6000MHz High Band: 15dB(Min) @1570-1610MHz	Size(mm): 1.68*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	DPX1608LL76R1925A 1608 1.9/2.5GHz Diplexer Type76	Freq. Range: 1710-1880MHz/ 2500-2690 MHz Insertion Loss: Low: 0.7dB(Max) High: 0.8dB(Max) VSWR*: 2.0dB (Max)	Attenuation: Low Band: 15dB (Min).@2500-2690MHz High Band: 15dB (Min).@1710-1880MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance
	DPX2012LL76R2455A 2012 2.4/5GHz Diplexer Type76	Freq. Range: 2400-2500MHz/ 4900-5950MHz Insertion Loss: Low: 0.65dB(Max) High: 0.65dB(Max) VSWR*: 2.0 (Max)	Attenuation: Low Band: 20dB(Min).@4800-5000MHz 20dB(Min).@7200-7500MHz High Band: 20dB (Min).@824-915MHz 20dB (Min).@1800-2500MHz 15dB (Min).@9800-11900MHz	Size(mm): 2.0*1.25*0.5 Operating Temp.: -40-85°C RoHS Compliance
	DPX2012LL75R2455A 2012 2.4/5GHz Diplexer Type75	Freq. Range: 2400-2500MHz/ 4900-5950MHz Insertion Loss: Low: 0.65dB(Max) High: 0.65dB(Max) VSWR*: 2.0dB (Max)	Attenuation: Low Band: 20dB(Min).@4800-5000MHz 20dB(Min).@7200-7500MHz High Band: 20dB(Min).@824-915 MHz 20dB(Min).@1800-2500 MHz 15dB(Min).@9800-11900 MHz	Size(mm): 2.0*1.25*0.5 Operating Temp.: -40-85°C RoHS Compliance
	DPX2012LL78R2455A 2012 2.4/5GHz Diplexer Type78	Freq. Range: 2400-2500 MHz/4900-5950 MHz Insertion Loss: Low: 0.60dB (Max.) High: 0.80dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 25dB Min @ 4800-5000 MHz 25dB Min @ 7200-7500 MHz High Band: 25dB Min @ 824-915 MHz 25dB Min @ 1800-2500 MHz 20dB Min @ 9800-11900 MHz	Size(mm): 2.0*1.2*0.5 Operating Temp.: -40 - 125°C RoHs Compliance
	DPX2012LL79R2455A 2012 2.4/5GHz Diplexer Type79	Freq. Range: 2400-2500 MHz/4900-5950 MHz Insertion Loss: Low: 0.60dB (Max.) High: 0.80dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 25dB Min @ 4800-5000 MHz 25dB Min @ 7200-7500 MHz High Band: 25dB Min @ 824-915 MHz 25dB Min @ 1800-2500 MHz 20dB Min @ 9800-11900 MHz	Size(mm): 2.0*1.2*0.5 Operating Temp.: -40 - 125°C RoHs Compliance
	DPX1608LL80R2455A 1608 2.4/5GHz Diplexer Type80	Freq. Range: 2400-2500MHz/ 4900-6000MHz Insertion Loss: Low: 0.7dB/ High: 0.8dB	Attenuation: Low Band: 20dB(Min). @4800-5000MHz 20dB(Min). @7200-7500MHz High Band:	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHS Compliance

Filter (Diplexer)

Model	Part No./ Description	Electrical Data		Mechanical Data
	DPX1608LL85R2455A 1608 2.4/5GHz Diplexer Type85	VSWR*: Low: 2.0dB(Max)/ High: 1.7dB(Max)	28dB(Min). @860-960MHz 23dB(Min). @1545-1605MHz 23dB(Min). @1710-1990MHz 28dB(Min). @2170MHz 8dB(Min). @8100MHz 15dB(Min). @8820-9800MHz 27dB(Min). @9800-11800MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40~85°C RoHS Compliance
	DPX1608LL83R2455A 1608 2.4/5GHz Diplexer Type83	Insertion Loss: 0.5dB Max @ 2400-2500MHz 1.5dB Max @ 4900-5950MHz VSWR*: 2.0(Max) Isolation: 35dB Max @ 2400-2500MHz 28dB Max @ 4900-5950MHz	Attenuation: Low Band: 25dB(Min).@4800-5000MHz 25dB(Min).@7200-7500MHz High Band: 32dB(Min).@300-2700MHz 15dB(Min).@9800-11900MHz 11dB(Min).@14700-17850MHz	Size(mm): 1.68*0.8*0.6 Operating Temp.: -40~85°C RoHS Compliance
	DPX1608LL65R2455A 1608 2.4/5GHz Diplexer Type65	Freq. Range: 2400-2500 MHz/4900-6000 MHz Insertion Loss: Low: 0.4dB (Max.) High: 0.7dB (Max.) VSWR*: 2.0db (Max)	Attenuation: Low Band: 30dB Min @ 4800-5000 MHz 32dB Min @ 7200-7500 MHz High Band: 27dB Min @ 2400-2500 MHz 27dB Min @ 10300-11700 MHz 20dB Min @ 15450-16200 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40~85°C RoHS Compliance
	DPX1608LL67R2455A 1608 2.4/5GHz Diplexer Type67	Freq. Range: 2400-2500 MHz/4900-6000 MHz Insertion Loss: Low: 0.50dB (Max.) High: 0.75dB (Max.) VSWR*: 1.7 / 1.7 (Max)	Attenuation Low Band: 30dB Min @ 4800-5000 MHz 32dB Min @ 7200-7500 MHz High Band: 27dB Min @ 2400-2500 MHz 27dB Min @ 10300-11700 MHz 20dB Min @ 15450-16200 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHS Compliance
	DPX1608LL66R2455A 1608 2.4/5GHz Diplexer Type66	Freq. Range: 2400-2500 MHz/4900-6000 MHz Insertion Loss: Low: 0.95dB (Max.) High: 0.9dB (Max.) VSWR*: 2.0db (Max)	Attenuation: Low Band: 25dB Min @ 700-960 MHz 10dB Min @ 960-1300 MHz 28dB Min @ 4800-5000 MHz 25dB Min @ 7200-7500 MHz High Band: 30dB Min @ 1200-1500 MHz 25dB Min @ 1600-2000 MHz 25dB Min @ 2300-2700 MHz 15dB Min @ 2700-3000 MHz 25dB Min @ 10000-11800 MHz 15dB Min @ 15000-17700 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40~85°C RoHS Compliance
	DPX1608LKfJR2455L 1608 2.4/5GHz Diplexer TypeFJ	Freq. Range: 2400-2500 MHz/4900-5950 MHz Insertion Loss: Low: 0.40dB (Max.) High: 0.60dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 21dB Min @ 4800-5000 MHz 23dB Min @ 5000-5950 MHz 25dB Min @ 7200-7500 MHz High Band: 25dB Min @ 824-2170 MHz 32dB Min @ 2400-2500 MHz 26dB Min @ 9800-11900 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 105°C RoHS Compliance

Filter (Diplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data	
	DPX1608LJFHR2455L 1608 2.4/5GHz Diplexer TypeFH	Freq. Range: 2400-2500 MHz/4900-5950 MHz Instertion Loss: Low: 0.60dB (Max.) High: 0.78dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 30dB Min @ 4800-5000 MHz 30dB Min @ 5000-6000 MHz 20dB Min @ 7200-7500 MHz High Band: 26dB Min @ 824-2170 MHz 30dB Min @ 2400-2500 MHz 25dB Min @ 9800-11900 MHz 15dB Min @ 14700-17850 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1608LJEHR2455L 1608 2.4/5GHz Diplexer TypeEH	Freq. Range: 2400-2500 MHz/4900-5950 MHz Instertion Loss: Low: 0.65dB (Max.) High: 0.80dB (Max.) VSWR*: 1.8 / 1.8 (Max)	Attenuation Low Band: 25dB Min @ 4800-5000 MHz 25dB Min @ 5000-5950 MHz 30dB Min @ 7200-7500 MHz High Band: 28dB Min @ 824-2170 MHz 30dB Min @ 2400-2500 MHz 28dB Min @ 9800-11900 MHz 18dB Min @ 14700-17850 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1005LKGAR2455L 1005 2.4/5GHz Diplexer TypeGA	Freq. Range: 2400-2500 MHz/4900-5950 MHz Instertion Loss: Low: 0.6dB (Max.) High: 1.0dB (Max.) VSWR*: 1.70 / 2.0 (Max)	Attenuation Low Band: 23dB Min @ 4800-6000 MHz 23dB Min @ 7200-7500 MHz High Band: 25dB Min @ 30-2400 MHz 32dB Min @ 2400-2500 MHz 23dB Min @ 2500-2690 MHz 20dB Min @ 9800-11900 MHz	Size(mm): 1.0*0.5*0.33 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1005LKHAR2455L 1005 2.4/5GHz Diplexer TypeHA	Freq. Range: 2400-2500 MHz/4900-5950 MHz Instertion Loss: Low: 0.50dB (Max.) High: 0.80dB (Max.) VSWR*: 1.70 / 2.0 (Max)	Attenuation Low Band: 23dB Min @ 4800-6000 MHz 23dB Min @ 7200-7500 MHz High Band: 25dB Min @ 30-2400 MHz 32dB Min @ 2400-2500 MHz 23dB Min @ 2500-2690 MHz 20dB Min @ 9800-11900 MHz	Size(mm): 1.0*0.5*0.33 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1608LJFGR2455L 1608 2.4/5GHz Diplexer TypeFG	Freq. Range: 2400-2500 MHz/4900-6000 MHz Instertion Loss: Low: 0.92dB (Max.) High: 1.20dB (Max.) VSWR*: 1.8 / 2.0 (Max)	Attenuation Low Band: 20dB Min @ 700-1300 MHz 27dB Min @ 4800-5000 MHz 30dB Min @ 7200-7500 MHz High Band: 23dB Min @ 1200-1500 MHz 21dB Min @ 1600-2000 MHz 20dB Min @ 2300-3000 MHz 25dB Min @ 10000-11800 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1608LJFKR2455L 1608 2.4/5GHz Diplexer TypeFK	Freq. Range: 2400-2500 MHz/4900-5950 MHz Instertion Loss: Low: 0.75dB (Max.) High: 0.95dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 20dB Min @ 4800-5000 MHz 25dB Min @ 5000-5950 MHz 20dB Min @ 7200-7500 MHz High Band: 26dB Min @ 824-2170 MHz 30dB Min @ 2400-2500 MHz 20dB Min @ 9800-11900 MHz 15dB Min @ 14700-17850 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1608LKEKR2455L 1608 2.4/5GHz Diplexer TypeEK	Freq. Range: 2400-2500 MHz/4900-5950 MHz Instertion Loss: Low: 0.60dB (Max.) High: 0.80dB (Max.) VSWR*: 1.8 / 1.8 (Max)	Attenuation Low Band: 29dB Min @ 4800-5000 MHz 24dB Min @ 7200-7500 MHz High Band: 32dB Min @ 30-2700 MHz 15dB Min @ 9800-11900 MHz 11dB Min @ 14700-17850 MHz	Size(mm): 1.6*0.8*0.7 Operating Temp.: -40 ~ 85°C RoHs Compliance

Filter (Diplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data	
	DPX1608LKF8R2455L 1608 2.4/5GHz Diplexer TypeFC	Freq. Range: 2400-2500 MHz/4900-5950 MHz Instertion Loss: Low: 0.60dB (Max.) High: 0.80dB (Max.) VSWR*: 1.8 / 1.8 (Max)	Attenuation Low Band: 29dB Min @ 4800-5000 MHz 24dB Min @ 7200-7500 MHz High Band: 32dB Min @ 30-2700 MHz 15dB Min @ 9800-11900 MHz 11dB Min @ 14700-17850 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1608LKE8R2455L 1608 2.4/5GHz Diplexer TypeE8	Freq. Range: 2400-2500 MHz/5150-5850 MHz Instertion Loss: Low: 0.70dB (Max.) High: 0.90dB (Max.) VSWR*: 1.8 / 1.8 (Max)	Attenuation Low Band: 27dB Min @ 4800-5000 MHz 27dB Min @ 7200-7500 MHz High Band: 27dB Min @ 2400-2500 MHz 27dB Min @ 10300-11700 MHz 27dB Min @ 15450-16200 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1608LKF8R2455L 1608 2.4/5GHz Diplexer TypeFC	Freq. Range: 2400-2500 MHz/5150-5850 MHz Instertion Loss: Low: 0.70dB (Max.) High: 0.90dB (Max.) VSWR*: 1.8 / 1.8 (Max)	Attenuation Low Band: 27dB Min @ 4800-5000 MHz 27dB Min @ 7200-7500 MHz High Band: 27dB Min @ 2400-2500 MHz 27dB Min @ 10300-11700 MHz 27dB Min @ 15450-16200 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1608LJFDR2455L 1608 2.4/5GHz Diplexer TypeFD	Freq. Range: 2400-2500 MHz/4900-5950 MHz Instertion Loss: Low: 0.65dB (Max.) High: 0.80dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 25dB Min @ 4800-5000 MHz 25dB Min @ 5150-7125 MHz 30dB Min @ 7200-7500 MHz High Band: 28dB Min @ 824-2170 MHz 30dB Min @ 2400-2500 MHz 28dB Min @ 9800-11900 MHz 18dB Min @ 14700-17850 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1608LKFFR2460L 1608 2.4/5-7GHz Diplexer TypeFF	Freq. Range: 2400-2500 MHz/5170-7125 MHz Instertion Loss: Low: 1.05dB (Max.) High: 1.30dB (Max.) VSWR*: 1.7 / 1.9 (Max)	Attenuation Low Band: 9dB Min @ 100-1000 MHz 30dB Min @ 4800-7125 MHz 30dB Min @ 7200-7500 MHz 20dB Min @ 7500-12000 MHz High Band: 35dB Min @ 100-1000 MHz 30dB Min @ 1000-2400 MHz 38dB Min @ 2400-2500 MHz 10dB Min @ 2500-3500 MHz 22dB Min @ 10340-14250 MHz 27dB Min @ 15510-17625 MHz 22dB Min @ 17625-21375 MHz	Size(mm): 1.6*0.8*0.7 Operating Temp.: -40 ~ 105°C RoHs Compliance
	DPX1608LKEFR2460L 1608 2.4/5-7GHz Diplexer TypeEF	Freq. Range: 2400-2500 MHz/5170-7125 MHz Instertion Loss: Low: 1.05dB (Max.) High: 1.30dB (Max.) VSWR*: 1.7 / 1.9 (Max)	Attenuation Low Band: 9dB Min @ 100-1000 MHz 30dB Min @ 4800-7125 MHz 30dB Min @ 7200-7500 MHz 20dB Min @ 7500-12000 MHz High Band: 35dB Min @ 100-1000 MHz 30dB Min @ 1000-2400 MHz 38dB Min @ 2400-2500 MHz 10dB Min @ 2500-3500 MHz 22dB Min @ 10340-14250 MHz 27dB Min @ 15510-17625 MHz 22dB Min @ 17625-21375 MHz	Size(mm): 1.6*0.8*0.7 Operating Temp.: -40 ~ 105°C RoHs Compliance

Filter (Diplexer)

Model	Part No./ Description	Electrical Data		Mechanical Data
	DPX1608LL60R2460A 1608 2.4G&5-7G Diplexer Type60	Freq. Range: 2400-2500 MHz/5170-7125 MHz Insertion Loss: Low: 0.5dB (Max.) High: 0.9dB (Max.) VSWR*: 2.0dB (Max)	Attenuation: Low Band: 28dB Min @ 4800-5000 MHz 25dB Min @ 5170-7125 MHz 30dB Min @ 7200-7500 MHz 27dB Min @ 9600-10000 MHz 20dB Min @ 12000-12500 MHz High Band: 28dB Min @ 500-2300 MHz 30dB Min @ 2300-2690 MHz 10dB Min @ 3400-3800 MHz 25dB Min @ 10340-14250 MHz 25dB Min @ 15510-18500 MHz 15dB Min @ 18500-21375 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40~85°C RoHS Compliance
	DPX1608LKW2R2460A 1608 2.4/5-7GHz Diplexer TypeW2	Freq. Range: 2400-2500 MHz/5150-7125 MHz Insertion Loss: Low: 1.25dB (Max.) High: 1.25dB (Max.) VSWR*: 1.7 / 2.0 (Max)	Attenuation Low Band: 10dB Min @ 1200 MHz 36dB Min @ 4800-5000 MHz 33dB Min @ 5150-7125 MHz 33dB Min @ 7200-7500 MHz 15dB Min @ 10300-14250 MHz 5dB Min @ 15450-21375 MHz High Band: 35dB Min @ 2400-2500 MHz 32dB Min @ 10300-14250 MHz 12dB Min @ 15450-21375 MHz	Size(mm): 1.6*0.8*0.7 Operating Temp.: -40 ~ 85°C RoHS Compliance
	DPX1608LKFBR2460L 1608 2.4/5-7GHz Diplexer TypeFB	Freq. Range: 2400-2500 MHz/5170-7125 MHz Insertion Loss: Low: 0.70dB (Max.) High: 0.90dB (Max.) VSWR*: 1.7 / 2.0 (Max)	Attenuation Low Band: 2dB Min @ 3300-4800 MHz 33dB Min @ 4800-5000 MHz 28dB Min @ 5170-7125 MHz 30dB Min @ 7200-7500 MHz 24dB Min @ 9600-10000 MHz 17dB Min @ 12000-12500 MHz High Band: 40dB Min @ 70-108 MHz 35dB Min @ 700-915 MHz 35dB Min @ 915-960 MHz 35dB Min @ 1425-1470 MHz 35dB Min @ 1470-1557 MHz 35dB Min @ 1557-1607 MHz 35dB Min @ 1710-1785 MHz 35dB Min @ 1805-1850 MHz 35dB Min @ 1850-1910 MHz 35dB Min @ 1910-2020 MHz 30dB Min @ 2110-2200 MHz 26dB Min @ 2300-2400 MHz 25dB Min @ 2400-2500 MHz 20dB Min @ 2500-2690 MHz 10dB Min @ 3400-3800 MHz 25dB Min @ 10340-14250 MHz 27dB Min @ 15510-16500 MHz 12.5dB typ. @ 16500-21375 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHS Compliance
	DPX1608LKG2R2460L 1608 2.4/5-7GHz Diplexer TypeG2	Freq. Range: 2400-2500 MHz/5150-7125 MHz Insertion Loss: Low: 1.05dB (Max.) High: 1.15dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 6dB Min @ 30-1200 MHz 26dB Min @ 4800-5000 MHz 28dB Min @ 5150-7125 MHz 30dB Min @ 7200-7500 MHz High Band: 28dB Min @ 2400-2500 MHz 27dB Min @ 10300-14250 MHz 25dB Min @ 15450-21375 MHz	Size(mm): 1.6*0.8*0.7 Operating Temp.: -40 ~ 85°C RoHS Compliance

Filter (Diplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data	
	DPX1608LKF3R2460A 1608 2.4/5-6GHz Diplexer TypeF3	Freq. Range: 2400-2500 MHz/4900-6300 MHz Instertion Loss: Low: 1.00dB (Max.) High: 1.15dB (Max.) VSWR*: 1.7 / 1.9 (Max)	Attenuation Low Band: 12dB Min @ 30-1000 MHz 35dB Min @ 4800-5000 MHz 30dB Min @ 5000-7125 MHz 35dB Min @ 7200-7500 MHz 18dB Min @ 7500-12000 MHz High Band: 40dB Min @ 70-1000 MHz 40dB Min @ 1000-2400 MHz 35dB Min @ 2400-2500 MHz 30dB Min @ 9800-10300 MHz 30dB Min @ 10300-12700 MHz 12dB Min @ 14700-18900 MHz	Size(mm): 1.6*0.8*0.7 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX1608LKM2R2460A 1608 2.4/5-7GHz Diplexer TypeM2	Freq. Range: 2400-2500 MHz/5170-7125 MHz Instertion Loss: Low: 0.70dB (Max.) High: 0.90dB (Max.) VSWR*: 1.8 / 2.0 (Max)	Attenuation Low Band: 2dB Min @ 3300-4800 MHz 33dB Min @ 4800-5000 MHz 28dB Min @ 5170-7125 MHz 30dB Min @ 7200-7500 MHz 24dB Min @ 9600-10000 MHz 17dB Min @ 12000-12500 MHz High Band: 40dB Min @ 70-108 MHz 35dB Min @ 700-915 MHz 35dB Min @ 915-960 MHz 35dB Min @ 1425-1470 MHz 35dB Min @ 1470-1557 MHz 35dB Min @ 1557-1607 MHz 35dB Min @ 1710-1785 MHz 35dB Min @ 1805-1850 MHz 35dB Min @ 1850-1910 MHz 35dB Min @ 1910-2020 MHz 30dB Min @ 2110-2200 MHz 26dB Min @ 2300-2400 MHz 25dB Min @ 2400-2500 MHz 20dB Min @ 2500-2690 MHz 10dB Min @ 3400-3800 MHz 25dB Min @ 10340-14250 MHz 27dB Min @ 15510-16500 MHz 12.5dB typ @ 16500-21375 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX2012LKGGR0920L 2012 LB/JB-HB Diplexer TypeGG	Freq. Range: 698-960 MHz/1427-2690 MHz Instertion Loss: Low: 0.75dB (Max.) High: 0.75dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 25dB Min @ 1427-2690 MHz High Band: 20dB Min @ 699-915 MHz 17dB Min @ 915-960 MHz 3dB Min @ 3420-3820 MHz	Size(mm): 2.0*1.25*0.9 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX2012LL75R0917A 2012 LB/MB-HB Diplexer Type75	Freq. Range: 698-960 MHz/1710-2700 MHz Instertion Loss: Low: 0.50dB (Max.) High: 0.50dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 30dB Min @ 1710-2170 MHz 30dB Min @ 2170-2400 MHz 35dB Min @ 2400-2700 MHz High Band: 25dB Min @ 698-960 MHz	Size(mm): 2.0*1.25*0.9 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX2012LL74R0917A 2012 LB/MB-HB Diplexer Type74	Freq. Range: 698-960 MHz/1710-2700 MHz Instertion Loss: Low: 0.50dB (Max.) High: 0.50dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 30dB Min @ 1710-2170 MHz 30dB Min @ 2170-2400 MHz 35dB Min @ 2400-2700 MHz High Band: 25dB Min @ 698-960 MHz	Size(mm): 2.0*1.25*0.9 Operating Temp.: -40 ~ 85°C RoHs Compliance

Filter (Diplexer)

Model	Part No./ Description	Electrical Data		Mechanical Data
	DPX2012LKHDR0922L 2012 LB/MB-HB Diplexer TypeHD	Freq. Range: 617-960 MHz/1710-2700 MHz Insertion Loss: Low: 0.50dB (Max.) High: 0.50dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 30dB Min @ 1710-2170 MHz 30dB Min @ 2170-2400 MHz 35dB Min @ 2400-2700 MHz High Band: 25dB Min @ 698-960 MHz	Size(mm): 2.0*1.25*0.9 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX2012LKWARWH46L 2012 LTE/n77-5GHz Diplexer TypeWA	Freq. Range: 617-2690 MHz/3300-5925 MHz Insertion Loss: Low: 0.95dB (Max.) High: 1.4dB (Max.) VSWR*: 1.7 / 1.7 (Max)	Attenuation Low Band: 17dB Min @ 3300-3400 MHz 23dB Min @ 3400-4200 MHz 23dB Min @ 4400-5000 MHz 28dB Min @ 5150-5925 MHz High Band: 30dB Min @ 617-960 MHz 30dB Min @ 1427-1511 MHz 25dB Min @ 1710-2170 MHz 22dB Min @ 2170-2690 MHz 22dB Min @ 10300-11850 MHz 10dB Min @ 15450-17775 MHz	Size(mm): 2.0*1.2*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX2012LL77R1925A 2012 MB/HB Diplexer Type77	Freq. Range: 1710-2170 MHz/2500-2690 MHz Insertion Loss: Low: 1.0dB (Max.) High: 1.2dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 12dB Min @ 2500-2690 MHz High Band: 12dB Min @ 1710-1980 MHz 15dB Min @ 2110-2170 MHz	Size(mm): 2.0*1.25*0.9 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX2012LKHHR1931L 2012 MB/HB-n78 Diplexer TypeHH	Freq. Range: 1710-2200 MHz/2496-3800 MHz Insertion Loss: Low: 1.85dB (Max.) High: 1.35dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 10dB Min @ 2496-2500 MHz 11dB Min @ 2500-2690 MHz High Band: 11dB Min @ 1710-1980 MHz 11dB Min @ 2110-2170 MHz 10dB Min @ 2170-2180 MHz 8dB Min @ 2180-2200 MHz	Size(mm): 2.0*1.25*0.9 Operating Temp.: -40 ~ 85°C RoHs Compliance
	DPX2012LKGHR1931L 2012 MB/HB-n78 Diplexer TypeGH	Freq. Range: 1710-2200 MHz/2496-3800 MHz Insertion Loss: Low: 1.85dB (Max.) High: 1.35dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 10dB Min @ 2496-2500 MHz 11dB Min @ 2500-2690 MHz High Band: 11dB Min @ 1710-1980 MHz 11dB Min @ 2110-2170 MHz 10dB Min @ 2170-2180 MHz 8dB Min @ 2180-2200 MHz	Size(mm): 2.0*1.25*0.9 Operating Temp.: -40 ~ 85°C RoHs Compliance

Filter (Diplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data	
	DPX2520LKGJR0920L 2520 LB/JB-HB Diplexer TypeGE	Freq. Range: 617-690 MHz/1452-2690 MHz Insertion Loss: Low: 0.70dB (Max.) High: 0.80dB (Max.) VSWR*: 1.7 / 1.7 (Max)	Attenuation Low Band: 18dB Min @ 1427-1463 MHz 23dB Min @ 1452-1496 MHz 23dB Min @ 1463-1496 MHz 23dB Min @ 1496-1511 MHz 20dB Min @ 1554-1605 MHz 20dB Min @ 1695-1710 MHz 20dB Min @ 1710-1850 MHz 20dB Min @ 1760-1850 MHz 20dB Min @ 1850-2108 MHz 23dB Min @ 2109-2200 MHz 25dB Min @ 2300-2400 MHz 25dB Min @ 2401-2496 MHz 25dB Min @ 2496-2586 MHz 28dB Min @ 2620-2745 MHz 30dB Min @ 3300-4200 MHz 30dB Min @ 4400-5000 MHz 30dB Min @ 5150-5925 MHz 5dB typ @ 5925-12750 MHz High Band: 23dB Min @ 617-915 MHz 24dB Min @ 915-980 MHz 10dB typ @ 3300-3400 MHz 15dB Min @ 3400-3600 MHz 15dB Min @ 3600-3800 MHz 15dB Min @ 3800-5130 MHz 28dB Min @ 5130-5925 MHz 7.5dB typ @ 5925-12750 MHz	Size(mm): 2.5*2.0*0.65 Operating Temp.: -40 ~ 85°C RoHS Compliance
	DPX2520LKGJR0922L 2520 LB/MB-HB Diplexer TypeGJ	Freq. Range: 617-690 MHz/1710-2690 MHz Insertion Loss: Low: 0.70dB (Max.) High: 0.80dB (Max.) VSWR*: 1.7 / 1.7 (Max)	Attenuation Low Band: 18dB Min @ 1427-1463 MHz 23dB Min @ 1452-1496 MHz 23dB Min @ 1463-1496 MHz 23dB Min @ 1496-1511 MHz 20dB Min @ 1554-1605 MHz 20dB Min @ 1695-1710 MHz 20dB Min @ 1710-1850 MHz 20dB Min @ 1760-1850 MHz 20dB Min @ 1850-2108 MHz 23dB Min @ 2109-2200 MHz 25dB Min @ 2300-2400 MHz 25dB Min @ 2401-2496 MHz 25dB Min @ 2496-2586 MHz 28dB Min @ 2620-2745 MHz 30dB Min @ 3300-4200 MHz 30dB Min @ 4400-5000 MHz 20dB Min @ 5150-5925 MHz 5dB typ @ 5925-12750 MHz High Band: 23dB Min @ 617-915 MHz 24dB Min @ 915-980 MHz 10dB typ @ 3300-3400 MHz 15dB Min @ 3400-3600 MHz 15dB Min @ 3600-3800 MHz 15dB Min @ 3800-5130 MHz 28dB Min @ 5130-5925 MHz 7.5dB typ @ 5925-12750 MHz	Size(mm): 2.5*2.0*0.65 Operating Temp.: -40 ~ 85°C RoHS Compliance

Filter (Diplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data
	DPX2520LKWERWH46L 2520 LTE/n77-5GHz Diplexer TypeWE	Freq. Range: 617-2690 MHz/3300-5950 MHz Insertion Loss: Low: 0.75dB (Max.) High: 1.40dB (Max.) VSWR*: 2.0 / 2.0 (Max)	Attenuation Low Band: 15dB Min @ 3300-3400 MHz 23dB Min @ 3400-3800 MHz 23dB Min @ 3800-4200 MHz 23dB Min @ 4400-5000 MHz 28dB Min @ 5150-5925 MHz High Band: 30dB Min @ 617-960 MHz 30dB Min @ 1427-1511 MHz 23dB Min @ 1710-2690 MHz 20dB Min @ 10300-11700 MHz 14dB Min @ 15450-17550 MHz Size(mm): 2.5*2.0*0.65 Operating Temp.: -40 ~ 85°C RoHs Compliance

*VSWR depends on the environment

Filter (Triplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data	
	TPX2012LL90R1525A 2012 1.575/2.4/5GHz Triplexer Type90	Freq. Range: 1570-1610MHz/ 2400-2500MHz/4900-5950MHz Insertion Loss: Low Band: 0.8dB/ Mid Band: 0.7dB/ High Band: 0.8dB VSWR*: Low Band: 2.0dB(Max)/ Mid Band: 2.0dB(Max) High Band: 1.6dB(Max)	Attenuation: Low Band: 20dB(Min). @2400-2500MHz 20dB(Min). @4800-6000MHz Mid Band: 17.5dB(Min). @4800-5000MHz 10dB(Min). @1545-1605MHz 10dB(Min). @9600-10000MHz High Band: 27dB(Min). @860-960MHz 25dB(Min). @1545-1605MHz 25dB(Min). @1710-1990MHz 30dB(Min). @2170MHz 8dB(Min). @8100MHz 15dB(Min). @8820-9800MHz 27dB(Min). @9800-10760MHz 25dB(Min). @10760-11800MHz	Size(mm): 2.0*1.2*0.9 Operating Temp.: -40-85°C RoHS Compliance
	TPX2012LL94R1525A 2012_ GPS/2.4GHz/5GHz Triplexer Type94	Freq. Range: Low Band 1560-1610 MHz Middle Band 2400-2500 MHz High Band 4900-5950 MHz Instertion Loss: LB: 0.6dB (Max) MB: 0.7dB (Max) HB: 0.8dB (Max) V.S.W.R.: 2.0(Max)/2.0(Max)/2.0(-Max) Isolation: MB-HB: 17dB(Min).@1.56-1.605GHz 15dB(Min).@4.8-5.95GHz MB-LB: 18dB(Min).@2.4-2.5GHz 9dB(Min).@4.8-6.0GHz HB-LB: 25dB(Min).@1.560-1.605GHz 25dB(Min).@2.4-2.5GHz	Attenuation Low Band: 16dB Min @ 2400-2500 MHz 14dB Min @ 4800-6000 MHz Middle Band: 17dB Min @ 1560-1605 MHz 17dB Min @ 4800-5000 MHz 10dB Min @ 7200-7500 MHz High Band: 30dB Min @ 860-960 MHz 25dB Min @ 1545-1605 MHz 25dB Min @ 1710-1990 MHz 28dB Min @ 2170 MHz 28dB Min @ 2400-2500 MHz 15dB Min @ 9800-11800 MHz	Size(mm): 2.0*1.2*0.9 Operating Temp.: -40 ~ 85°C RoHs Compliance

Filter (Triplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data
	TPX2012LL95R1525A	Freq. Range: 1570-1610MHz/ 2400-2500MHz/4900-5950MHz	Size(mm): 2.0*1.2*0.9
	2012 1.575/2.4/5GHz Triplexer Type95	Insertion Loss: Low Band: 0.8dB/ Mid Band: 0.7dB/ High Band: 0.8dB VSWR*: Low Band: 2.0dB(Max)/ Mid Band: 2.0dB(Max) High Band: 1.6dB(Max)	Operating Temp.: -40~85°C RoHS Compliance
	TPX2012LL96R1525A	Freq. Range: Low Band 1164-1189 MHz 1226-1229 MHz 1559-1606 MHz Middle Band 2400-2500 MHz	Size(mm): 2.0*1.25*0.65
	2012_ GPS/2.4GHz/5GHz Triplexer Type96	High Band 4900-5100 MHz 5100-5950 MHz Insertion Loss: LB : 0.8/0.8/0.9dB (Max) MB: 1.1dB (Max) HB : 1.5/1.3dB (Max) V.S.W.R. : 2.0(Max)/2.0(Max)/2.0(-Max) Isolation: MB-HB: 30dB(Min).@2.4-2.5GHz 25dB(Min).@4.8-5.0GHz LB-MB: 25dB(Min).@1.164-1.188GHz 15dB(Min).@1.559-1.606GHz 20dB(Min).@2.4-2.5GHz HB-LB: 33dB(Min).@1.164-1.188GHz 32dB(Min).@1.559-1.606GHz 25dB(Min).@4.9-6.0GHz	Operating Temp.: -40 ~ 85°C RoHS Compliance
		Attenuation: Low Band: 20dB(Min). @2400-2500MHz 20dB(Min). @4800-6000MHz Mid Band: 17.5dB(Min). @4800-5000MHz 10dB(Min). @1545-1605MHz 10dB(Min). @9600-10000MHz High Band: 27dB(Min). @860-960MHz 25dB(Min). @1545-1605MHz 25dB(Min). @1710-1990MHz 30dB(Min). @2170MHz 8dB(Min). @8100MHz 15dB(Min). @8820-9800MHz 27dB(Min). @9800-10760MHz 25dB(Min). @10760-11800MHz	
		Attenuation Low Band: 0.5dB Min @ 1850-1980 MHz 20dB Min @ 2400-2500 MHz 20dB Min @ 4800-6000 MHz Middle Band: 10dB Min @ 1200-1250 MHz 10dB Min @ 1570-1600 MHz 22dB Min @ 4800-6000 MHz 25dB Min @ 7200-7500 MHz 25dB Min @ 9600-10000 MHz High Band: 25dB Min @ 1610-2000 MHz 20dB Min @ 2001-2370 MHz 27dB Min @ 2400-3000 MHz 30dB Min @ 3300-3800 MHz 5dB Min @ 3800-4200 MHz 20dB Min @ 9800-12000 MHz 18dB Min @ 14200-18000 MHz	

Filter (Triplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data	
	TPX2520L09AR0924L 2520 LB/JB-HB/n77-5GHz Triplexer Type9A	Freq. Range: Low Band 500-798 MHz 815-894 MHz 880-915 MHz 915-960 MHz Middle Band 1427-1511 MHz 1710-1880 MHz 1880-1920 MHz 1930-2200 MHz 2300-2400 MHz 2496-2690 MHz High Band 3300-3400 MHz 3400-3600 MHz 3600-3800 MHz 3800-4200 MHz 4400-5000 MHz 5150-5925 MHz Instertion Loss: LB : 0.65/0.7/0.75/0.95dB(Max) MB : 1.45/1.0/0.95/0.95/1.0/1.45dB (Max) HB : 0.95/0.85/0.8/0.7/0.7/0.85dB (Max) V.S.W.R. : 2.0(Max)/2.0(Max)/2.0(-Max)	Attenuation Low Band: 12dB Min @ 1427-2690 MHz 22dB Min @ 1575-1610 MHz 27dB Min @ 4400-5000 MHz 40dB Min @ 3300-3400 MHz 40dB Min @ 3400-3800 MHz 40dB Min @ 3800-4200 MHz 40dB Min @ 4400-5000 MHz 35dB Min @ 5150-5925 MHz Middle Band: 18dB Min @ 500-960 MHz 20dB Min @ 3300-3400 MHz 23dB Min @ 3400-3800 MHz 30dB Min @ 3800-4200 MHz 30dB Min @ 4500-5000 MHz 27dB Min @ 5150-5925 MHz High Band: 19dB Min @ 500-960 MHz 15dB Min @ 1427-2690 MHz 19dB Min @ 10300-11850 MHz	Size(mm): 2.5*2.0*0.65 Operating Temp.: -40 ~ 85°C RoHs Compliance
		TPX2520LKTBR0914L 2520_ LB/JB-MB/HB-5GHz Triplexer TypeTB	Freq. Range: Low Band 698-960 MHz Middle Band 1452-1496 MHz 1710-2170 MHz High Band 2496-2690 MHz 3300-4200 MHz 4400-5000 MHz 4900-5850 MHz Instertion Loss: LB : 0.8 dB (Max) MB : 2.3 / 1.6 dB (Max) HB : 1.55/1.0/1.0/1.0dB (Max) V.S.W.R. : 2.0(Max)/2.0(Max)/2.0(-Max) Isolation: MB-HB : 30dB(Min).@1452-1496 MHz 16dB(Min).@1710-2170 MHz 17dB(Min).@2496-2690 MHz LB-MB : 21dB(Min).@698-960 MHz 12dB(Min).@1452-1496 MHz 17dB(Min).@1710-2170 MHz HB-LB : 28dB(Min).@698-960 MHz 35dB(Min).@2496-2690 MHz	Attenuation Low Band: 12dB Min @ 1452-1496 MHz 15dB Min @ 1565-1606 MHz 17dB Min @ 1710-2170 MHz 30dB Min @ 2496-2690 MHz 30dB Min @ 3300-4200 MHz 30dB Min @ 4400-5000 MHz 30dB Min @ 4900-5850 MHz Middle Band: 21dB Min @ 698-960 MHz 17dB Min @ 2496-2690 MHz 15dB Min @ 3300-3800 MHz 20dB Min @ 3800-4200 MHz 20dB Min @ 4400-5000 MHz 20dB Min @ 4900-5850 MHz High Band: 23dB Min @ 698-960 MHz 30dB Min @ 1452-1496 MHz 16dB Min @ 1710-2170 MHz

Filter (Triplexer)

Model	Part No./ Description	Electrical Data	Mechanical Data	
	TPX2520LKTCR0913L 2520_ LB/JB-MB/HB- n77-n79 Triplexer TypeTC	Freq. Range: Low Band 698-960 MHz Middle Band 1427-1511 MHz 1710-2170 MHz High Band 2496-2690 MHz 3300-3800 MHz 3800-4200 MHz 4400-5000 MHz Instertion Loss: LB : 0.8 dB (Max) MB : 1.35 / 1.3 dB (Max) HB : 1.7/0.6/0.6/0.6dB (Max) V.S.W.R. : 1.5(Max)/1.5(Max)/1.5(Max) Isolation: MB-HB : 15dB(Min).@1427-1511 MHz 15dB(Min).@1710-2170 MHz 13dB(Min).@2496-2690 MHz 15dB(Min).@3300-3800 MHz 15dB(Min).@3800-4200 MHz 15dB(Min).@4400-5000 MHz LB-MB : 14dB(Min).@698-960 MHz 7dB(Min).@1427-1511 MHz 13dB(Min).@1710-2170 MHz HB-LB : 15dB(Min).@698-960 MHz 30dB(Min).@2496-2690 MHz 30dB(Min).@3300-3800 MHz 30dB(Min).@3800-4200 MHz 30dB(Min).@4400-5000 MHz	Attenuation Low Band: 7dB Min @ 1424-1511 MHz 12dB Min @ 1710-2170 MHz 27dB Min @ 2500-2690 MHz 35dB Min @ 3300-4200 MHz 35dB Min @ 4400-5000 MHz Middle Band: 14dB Min @ 698-960 MHz 10dB Min @ 2500-2690 MHz 15dB Min @ 3300-4200 MHz 15dB Min @ 4400-5000 MHz High Band: 18dB Min @ 698-960 MHz 16dB Min @ 1427-1511 MHz 15dB Min @ 1710-2170 MHz	Size(mm): 2.5*2.0*0.65 Operating Temp.: -40 ~ 85°C RoHs Compliance
		TPX2520LKTDNRWH34L 2520_ LTE/n78/n79 Triplexer TypeTD	Freq. Range: Low Band 617-1990 MHz 2300-2496 MHz 2496-2690 MHz Middle Band 3300-4200 MHz High Band 4400-5000 MHz Instertion Loss: LB : 0.8/0.9/1.35 dB (Max) MB : 1.35 dB (Max) HB : 1.35 dB (Max) V.S.W.R. : 2.0(Max)/2.0(Max)/2.0(- Max) Isolation: MB-HB : 25dB(Min).@617-960 MHz 25dB(Min).@1427-1606 MHz 25dB(Min).@1710-2690 MHz 16dB(Min).@3300-3600 MHz 16dB(Min).@3600-3800 MHz 15dB(Min).@4400-5000 MHz LB-MB : 16dB(Min).@617-960 MHz 15dB(Min).@1695-1710 MHz 15dB(Min).@1710-2200 MHz 14dB(Min).@2300-2690 MHz 14dB(Min).@3300-3800 MHz 18dB(Min).@5150-5925 MHz HB-LB : 16dB(Min).@617-960 MHz 15dB(Min).@1695-1710 MHz 15dB(Min).@1710-2200 MHz 14dB(Min).@2300-2690 MHz 14dB(Min).@3300-3800 MHz 18dB(Min).@5150-5925 MHz	Attenuation Low Band: 15dB Min @ 3300-3700 MHz 15dB Min @ 3700-3800 MHz 15dB Min @ 3800-4200 MHz 25dB Min @ 4400-5000 MHz 25dB Min @ 5150-5925 MHz 10dB Min @ 5925-12750 MHz Middle Band: 12dB Min @ 617-2690 MHz 14dB Min @ 4400-5000 MHz High Band: 16dB Min @ 617-2690 MHz 14dB Min @ 2170-3150 MHz 14dB Min @ 3300-3600 MHz 17dB Min @ 3600-3800 MHz 2.1dB typ @ 3800-4200 MHz 15dB Min @ 8800-10000 MHz 5dB Min @ 13200-15000 MHz

Balun				
Model	Part No./ Description	Electrical Data	Mechanical Data	
	BLN0605LM09R0780A 0605 LSMH/EUDD Balun Type09, 5050	Freq. Range: 729-821MHz Insertion Loss: 0.6 dB (Max) VSWR*: 2.0dB (Max)	Unbalanced Impedance: 50Ω Balanced Impedance: 100Ω Phase Difference: 180 ± 10degree Amplitude Difference: ± 2 dB (Max)	Size(mm): 0.65*0.5*0.35 Operating Temp.: -40~85°C RoHS Compliance
	LPF1608LL60R0709A 1608 0.7-0.96GHz LPF Type60	Freq. Range: 698 - 960 MHz Insertion Loss: 0.6 dB (Max) VSWR*: 2.0 (Max) Impedance : 50Ω	Attenuation 13dB Min @ 1554 ~ 1610 MHz 35dB Min @ 1805 ~ 1830 MHz 35dB Min @ 2110 ~ 2170 MHz 30dB Min @ 1710 ~ 2700 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHS Compliance
	LPF1608LRR2R0709L 1608 0.7-0.96GHz LPF TypeR2	Freq. Range: 690 ~ 960 MHz Insertion Loss: 1.1 dB (Max) VSWR*: 2.0 (Max) Impedance : 50Ω	Attenuation 20dB Min @ 1350 ~ 1920 MHz 48dB Min @ 2070 ~ 2880 MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHS Compliance
	BLN0605LL19R1880A 0605 PCS/DCS RX Balun Type19, 5050	Freq. Range: 1805-1990MHz Insertion Loss: 0.6 dB (Max) VSWR*: 2.0dB (Max)	Unbalanced Impedance: 50Ω Balanced Impedance: 100Ω Phase Difference: 180 ± 10degree Amplitude Difference: ± 2 dB (Max)	Size(mm): 0.65*0.5*0.35 Operating Temp.: -40~85°C RoHS Compliance
	BLN1608LL01R2400A 1608 2.4G Balun Type01, 50100	Freq. Range: 2400-2500MHz Insertion Loss: 1.1 dB (Max) VSWR*: 2.0 (Max)	Unbalanced Impedance: 50Ω Balanced Impedance: 100Ω Phase Difference: 180 ±10 degree Amplitude Difference: 2 dB (Max)	Size(mm): 1.6*0.8*0.65 Operating Temp.: -40~85°C RoHS Compliance
	BLN1608LL30R2400A 1608 2.4G Balun Type30, 5050	Freq. Range: 2400-2500MHz Insertion Loss: 1.2dB(Max) VSWR*: 2.0dB(Max)	Unbalanced Impedance: 50Ω Balanced Impedance: 50Ω Phase Difference: 180 ± 10 degree Amplitude Difference: 2 dB (Max)	Size(mm): 1.6*0.8*0.65 Operating Temp.: -40~85°C RoHS Compliance
	BLN1005LM39R2500A 1005 2.3-2.7GHz Balun Type39, 5050	Freq. Range: 2300-2690MHz Insertion Loss: 0.6 (Max) VSWR*: 2.0dB (Max)	Unbalanced Impedance: 50Ω Balanced Impedance: 100Ω Phase Difference: 180 ± 17 degree Amplitude Difference: ± 3.7 dB (Max)	Size(mm): 1.0*0.5*0.35 Operating Temp.: -40~85°C RoHS Compliance
	BLN0605LL39R2500A 0605 2.3-2.7GHz Balun Type39, 5050	Freq. Range: 2300-2690MHz Insertion Loss: 0.6 dB (Max) VSWR*: 2.0dB (Max)	Unbalanced Impedance: 50Ω Balanced Impedance: 100Ω Phase Difference: 180 ± 10degree Amplitude Difference: ± 2 dB (Max)	Size(mm): 0.65*0.5*0.35 Operating Temp.: -40~85°C RoHS Compliance

*VSWR depends on the environment

Balance Filter (Combo)

Model	Part No./ Description	Electrical Data	Mechanical Data
	BLF2012LL98R2400A 2012 2.4G Combo Type98	Freq. Range: 2400-2500MHz Insertion Loss: 3.5dB (Max) VSWR*: 2.0 (Max) Unbalanced Impedance: 50Ω Balanced Impedance: Conjugate match to CSR BC03/04 series Phase Difference: 180 ±5 degree @25°C Amplitude Balance: 1.0 dB (Max)	Size(mm): 2.0*1.2*0.9 Operating Temp.: -40-85°C RoHS Compliance

Coupler

Model	Part No./ Description	Electrical Data		Mechanical Data
	CPL0605AT13R2455A 0605 2.4G/5GHz CPL Type13	Freq. Range: 2400-2500 MHz/4900-5950 MHz Insertion Loss: Low: 0.22dB (Max.) High: 0.50dB (Max.) VSWR*: 1.3dB / 1.5dB (Max)	Impedance : 50Ω Coupling (dB) 17.5 ~ 20.5 / 10.5 ~ 14.5 Directivity (dB) 15 (Min) / 15 (Min)	Size(mm): 0.65*0.5*0.38 Operating Temp.: -40 ~ 85°C RoHs Compliance
	CPL0605LL15R2460A 0605 2.4G/5-7GHz CPL Type15	Freq. Range: 2400-2500 MHz/4900-7125 MHz Insertion Loss: Low: 0.30dB (Max.) High: 0.40dB (Max.) VSWR*: 1.5dB / 1.5dB (Max)	Impedance : 50Ω Coupling (dB) 23.5 ~ 25.5 / 15 ~ 19 Directivity (dB) 16 (Min) / 16 (Min)	Size(mm): 0.65*0.5*0.35 Operating Temp.: -40 ~ 85°C RoHs Compliance
	CPL1608LL09RWHEXA 1608 WWAN<E Coupler Type09	Freq. Range: 689.5-960.5MHz 1700-2100MHz/2300-2700MHz Insertion Loss: 0.25dB(Max)/ 0.3dB(Max)/ 0.4dB(Max) VSWR*: 1.4dB(Max)	Coupling: 23-28dB@689.5-960.5MHz 19.5-22.5dB@1700-2100MHz 19.5-24.5dB@2300-2700MHz	Size(mm): 1.6*0.8*0.7 Operating Temp.: -40-85°C RoHs Compliance
	CPL1608LL11RWHEXA 1608 LTE CPL Type11	Freq. Range: 578-2700MHz Insertion Loss: 0.15dB (Max.) VSWR*: 1.5dB (Max)	Impedance : 50Ω Coupling (dB) 30 ~ 39	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40 ~ 85°C RoHs Compliance
	CPL1608LL12RWHEXA 1608 WWAN & LTE Coupler Type12	Freq. Range: 689-960MHz 1710-2170MHz/2300-2690MHz Insertion Loss: 0.2dB(Max)/ 0.25dB(Max)/ 0.3dB(Max) VSWR*: 1.45dB(Max)	Coupling: 23-27dB@689-960MHz 21.5-26.5dB@1710-2170MHz 22.5-27.5dB@2300-2690MHz	Size(mm): 1.6*0.8*0.6 Operating Temp.: -40-85°C RoHs Compliance

*VSWR depends on the environment

2.4 GHz

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT1204F001R2400A 1204 2.4GHz PIFA Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 6.66 dBi (Typ.)	Size (mm): 12*4*2.0 Operating Temp.: -40-105°C RoHS Compliance
	ANT9520LL06R2400A 9520 2.4GHz Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.5 (Max) Polarization: Linear Peak Gain: 2.85 dBi (Typ.)	Size (mm): 9.5*2.0*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT8010LL04R2400A 8010 2.4GHz Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain : 5.88 dBi (Typ.)	Size (mm): 8.0*1.0*1.0 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT7020LL05R2400A 7020 2.4GHz Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.8 (Max) Polarization: Linear Peak Gain: 2.62 dBi (Typ.)	Size (mm): 7.0*2.0*0.8 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT5320LL45R2400A 5320 2.4GHz Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 5.5 dBi (Typ.)	Size (mm): 5.3*2.0*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT5320LL24R2400A 5320 2.4GHz PIFA Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 2.78 dBi (Typ.)	Size (mm): 5.3*2.0*1.25 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT5010LL04R2400A 5010 2.4GHz Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*:2.8 (Max) Polarization: Linear Peak Gain: 2.28 dBi (Typ.)	Size (mm): 5.0*1.0*1.0 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT3216LL00R2400A 3216 2.4GHz Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.5 (Max) Polarization: Linear Peak Gain: 5 dBi (Typ.)	Size (mm): 3.2*1.6*1.3 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT3216A063R2400A 3216 2.4GHz PIFA Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.8dB (Max) Polarization: Linear Peak Gain: 1.69 dBi(Typ.)	Size(mm): 35*35*4 + 25*25*4 Operating Temp.: -40 ~ +105 °C RoHS Compliance
	ANT3216LL11R2400A 3216 2.4GHz PIFA Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.8 (Max) Polarization: Linear Peak Gain: 3.68 dBi (Typ.)	Size (mm): 3.2*1.6*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT2012LL13R2400A 2012 2.4GHz PIFA Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 2.72 dBi (Typ.)	Size (mm): 2.0*1.2*1.0 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1608LL14R2400A 1608 2.4GHz PIFA Chip Antenna	Freq. Range: 2400-2500 MHz VSWR*: 3.0 (Max) Polarization: Linear Peak Gain: 2.0 dBi (Typ.)	Size (mm): 1.6*0.8*0.4 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1005LL14R2400A 1005 2.4G PIFA Chip Antenna	Freq. Range: 2400-2484 MHz VSWR*: 3.0 (Max) Polarization: Linear Peak Gain: 2.21 dBi (Typ.)	Size (mm): 1.0*0.5*0.37 Operating Temp.: -40 ~ 105°C RoHS Compliance

*VSWR depends on the environment

LTCC RF Components

Antenna - 2.4 GHz / GPS, 2.4 / 5 GHz, 5 GHz, 2.4 / 5-7 GHz (WiFi 6E)

2.4 GHz / GPS

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT1003LL15R1524A 1003 2.4GHz+GPS PIFA Chip Antenna	Freq. Range: 1575 / 2400 MHz VSWR*: 2.8 (Max) Polarization: Linear Peak Gain: 1.15 dBi / 2.90 dBi (Typ.)	Size (mm): 10*3*1.5 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT5320LL07R1524A / 5320 2.4GHz+GPS PIFA Chip Antenna	Freq. Range: 1575 / 2400 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 2.47 dBi / 2.04 dBi (Typ.)	Size (mm): 5.3*2.0*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance

2.4 / 5 GHz

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT1003LL15R2455A 1003 2.4+5GHz Chip Antenna	Freq. Range: 2400-2500/ 5150-5875 MHz VSWR*: 2.8 (Max) Polarization: Linear Peak Gain: 2.45 dBi / 1.55dBi (Typ.)	Size (mm): 10*3*1.6 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT5320LL04R2455A 5320 2.4+5GHz Chip Antenna	Freq. Range: 2400-2500/ 5150-5875 MHz VSWR*: 2.8 (Max) Polarization: Linear Peak Gain: 2.72 dBi / 3.85 dBi (Typ.)	Size (mm): 5.3*2.0*1.4 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT5320LL24R2455A 5320 2.4+5GHz PIFA Chip Antenna	Freq. Range: 2400-2500/ 5150-5875 MHz VSWR*: 2.8 (Max) Polarization: Linear Peak Gain: 2.17 dBi / 3.51 dBi (Typ.)	Size (mm): 5.3*2.0*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT3216LL11R2455A 3216 2.4+5GHz PIFA Chip Antenna	Freq. Range: 2400 - 2500/5150 - 5875 MHz VSWR*: 2.8 (Max) Polarization: Linear Peak Gain: 0.45/0.64 dBi (Typ.)	Size (mm): 3.2*1.6*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1608LL14R2455A 1608 2.4+5GHz PIFA Chip Antenna	Freq. Range: 2400 - 2500/5150 - 5875 MHz VSWR*: 3.5 (Max) Polarization: Linear Peak Gain: 3.11 / 3.43 dBi (Typ.)	Size (mm): 1.6*0.8*0.4 Operating Temp.: -40-105°C RoHS Compliance

5 GHz

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT3216LL05R5000A 3216 5GHz Chip Antenna	Freq. Range: 5150-5875 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 5.71 dBi (Typ.)	Size (mm): 3.2*1.6*1.3 Operating Temp.: -40 ~ 105°C RoHS Compliance

*VSWR depends on the environment

2.4 / 5-7 GHz (WiFi 6E)

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT3216LL11R2460A 3216 2.4&5-7GHz PIFA Chip Antenna	Freq. Range: 2400 - 2500/5150 - 7125 MHz VSWR*: 2.6 (Max) Polarization: Linear Peak Gain: 2.0 / 2.5 dBi(Typ.)	Size (mm): 3.2*1.6*1.2 Operating Temp.: -40-105°C RoHS Compliance
	ANT1608LL14R2460A 1608 2.4&5-7GHz PIFA Chip Antenna	Freq. Range: 2400 - 2500/5150 - 7125 MHz VSWR*: 2.6 (Max) Polarization: Linear Peak Gain: 3.65 / 3.69 dBi(Typ.)	Size (mm): 1.6*0.8*0.4 Operating Temp.: -40-105°C RoHS Compliance

LTCC RF Components

Antenna - UWB, Cellular WWAN, Short Range

UWB

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT3216LL00R6580A 3216 6.5+8GHz Chip Antenna	Freq. Range: 6200 - 8200 MHz VSWR*: 2 (Max) Polarization: Linear Peak Gain: 2 dBi(Min.)	Size (mm): 3.2*1.6*1.2 Operating Temp.: -30-85°C RoHS Compliance
	ANT3216LL10R6580A 3216 6.5+8GHz PIFA Chip Antenna	Freq. Range: 6200 - 8200 MHz VSWR*: 2 (Max) Polarization: Linear Peak Gain: 2 dBi(Min.)	Size (mm): 3.2*1.6*0.6 Operating Temp.: -30-85°C RoHS Compliance

*VSWR depends on the environment

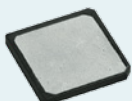
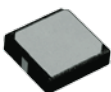
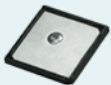
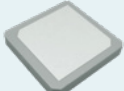
Cellular WWAN

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT1204LL00R0918A 1204 Cellular-Band Chip Antenna	Freq. Range: 900/1800 MHz VSWR*: 3.0 (Max) Polarization: Linear Peak Gain: N/A	Size (mm): 12*4*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT3505B002TWPENS 3505 Penta-band Antenna	Freq. Range: 824-960 /1710-2170 MHz VSWR*: 2.8 / 3.5 (Max) Polarization: Linear Peak Gain: 2.9 dBi (Typ.)	Size (mm): 35*5*6 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT4005B000RWHEXS 4005 LTE Antenna	Freq. Range: 698 - 960/1710 - 2690 MHz VSWR*: 3.0 Max (Low Band) Polarization: Linear Peak Gain: 3.2 / 4.0 dBi (Typ.)	Size (mm): 40*5*6 Operating Temp.: -40 ~ 80°C RoHS Compliance

Short-Range

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT1204LL05R0915A 1204 915MHz Chip Antenna	Freq. Range: 915 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 3.32 dBi (Typ.)	Size (mm): 12*4*1.6 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1204LL08R0870A 1204 870MHz Chip Antenna	Freq. Range: 870 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 0.5 dBi (Typ.)	Size (mm): 12*4*1.6 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1204LL16R0870A 1204 870MHz PIFA Chip Antenna	Freq. Range: 870 MHz VSWR*: 2.8 (Max) Polarization: Linear Peak Gain: 1.05 dBi (Typ.)	Size (mm): 12*4*1.0 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT7020LL05R0870A 7020 870MHz Chip Antenna	Freq. Range: 870 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: N/A	Size (mm): 7.0*2.0*0.7 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1204LL20R0433A 1204 433MHz Chip Antenna	Freq. Range: 315/ 433 MHz VSWR*: 3.0 (Max) Polarization: Linear Peak Gain: 0.83 dBi (Typ.)	Size (mm): 12*4*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT2405F001R0169A 2405 169MHz Chip Antenna	Freq. Range: 169 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: N/A	Size (mm): 24*5*1.6 Operating Temp.: -40 ~ 105°C RoHS Compliance

GPS

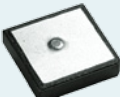
Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT3216LL15R1575A 3216 GPS PIFA Chip Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 7.32 dBi (Typ.)	Size (mm): 3.2*1.6*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1010B00FT1575S 10104 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: -3 dBic(Typ.)	Size (mm): 10*10*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT1212B00DT1575S 12124 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: -1 dBic(Typ.)	Size (mm): 12*12*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT1515B00DT1575S 15154 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 1.5 dBic(Typ.)	Size (mm): 15*15*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT1515B00FT1575S 15154 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 2.0 dBic(Typ.)	Size (mm): 15*15*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT1818B00AT1575S 18182 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 2 dBic(Typ.)	Size (mm): 18*18*2 Operating Temp.: -40 ~ 105°C Mounting: SMD RoHS Compliance
	ANT1818B00BT1575S 18184 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 2 dBic(Typ.)	Size (mm): 18*18*4 Operating Temp.: -40 ~ 105°C Mounting: SMD RoHS Compliance
	ANT1818B00CT1575S 18182 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 2 dBic(Typ.)	Size (mm): 18*18*2 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT1818B00DT1575S 18184 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 4 dBic(Typ.)	Size (mm): 18*18*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT1818B00ET1575S 18182 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 2 dBic(Typ.)	Size (mm): 18*18*2 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT2525B00AT1575S 25252 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 5 dBic(Typ.)	Size (mm): 25*25*2 Operating Temp.: -40 ~ 105°C Mounting: SMD RoHS Compliance
	ANT2525B00BT1575S 25254 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 5.5 dBic(Typ.)	Size (mm): 25*25*4 Operating Temp.: -40 ~ 105°C Mounting: SMD RoHS Compliance

GPS

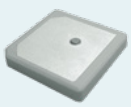
Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT2525B00CT1575S 25252 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 4.5 dBic(Typ.)	Size (mm): 25*25*2 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT2525B00DT1575S 25254 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 5 dBic(Typ.)	Size (mm): 25*25*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT2525B00ET1575S 25252 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 4.5 dBic(Typ.)	Size (mm): 25*25*2 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT2525B00FT1575S 25254 GPS Patch Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 5 dBic(Typ.)	Size (mm): 25*25*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance

*VSWR depends on the environment

GPS+Glonass

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT8010LL05R1516A 8010 GPS+Glonass Chip Antenna	Freq. Range: 1575 / 1602 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 1.53 / 1.69 dBi (Typ.)	Size (mm): 8.0*1.0*1.0 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1212B00FT1516S 12124 GPS+Glonass Patch Antenna	Freq. Range: 1575 / 1602 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 1.80 / 1.60 dBi (Typ.)	Size (mm): 12*12*4 Operating Temp.: -35 ~ 85°C Mounting: PIN RoHS Compliance
	ANT1515B00FT1516S 15154 GPS+Glonass Patch Antenna	Freq. Range: 1575 / 1602 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 2.21 / 2.00 dBi (Typ.)	Size (mm): 15*15*4 Operating Temp.: -35 ~ 85°C Mounting: PIN RoHS Compliance
	ANT5320LL14R1516A 8010 GPS+Glonass Chip Antenna	Freq. Range: 1575 / 1602 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 1.45dBi / 1.46dBi (Typ.)	Size (mm): 5.3*2.0*1.2 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1818B00BT1516S 18184 Gps+Glonass Patch Antenna	Freq. Range: 1575 / 1602 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 1.89 / 2.59 dBi (Typ.)	Size (mm): 18*18*4 Operating Temp.: -40 ~ 105°C Mounting: SMD RoHS Compliance
	ANT1818B00DT1516S 18184 Gps+Glonass Patch Antenna	Freq. Range: 1575 / 1602 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 2.65 / 2.79 dBi (Typ.)	Size (mm): 18*18*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT2525B00BT1516S 25254 Gps+Glonass Patch Antenna	Freq. Range: 1575 / 1602 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 3.44 / 4.10 dBi (Typ.)	Size (mm): 25*25*4 Operating Temp.: -40 ~ 105°C Mounting: SMD RoHS Compliance

GPS+Glonass

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT2525B00DT1516S 25254 Gps+Glonass Patch Antenna	Freq. Range: 1575 / 1602 MHz VSWR*: 2.0 (Max) Polarization: Linear Peak Gain: 3.5 / 3.8 dBi (Typ.)	Size (mm): 25*25*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance

GNSS

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT1204LLO4RGNSSA 1204 GNSS Chip Antenna	Freq. Range: 1559 - 1610 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 2.32 dBic (Typ.)	Size (mm): 12*4*1.1 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT2525B00FTGNSSS 25254 GNSS Patch Antenna	Freq. Range: 1559 - 1610 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 5.16 dBic (Typ.)	Size (mm): 25*25*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance
	ANT1818B00FTGNSSS 18184 GNSS Patch Antenna	Freq. Range: 1559 - 1610 MHz VSWR*: 3.5 (Max) Polarization: RHCP Peak Gain: 3 dBic (Typ.)	Size (mm): 18*18*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance

*VSWR depends on the environment

GNSS+L2

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT1825BSOXTGNL2S 18184 + 25254 GNSS+L2 Stack Antenna (1+1)	Freq. Range: 1227 & 1559-1610 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 4.7 dBic (GNSS)/3.4 dBic (L2) Axial Ratio: GNSS < 10, L5 < 7	Size (mm): 18*18*4 + 25*25*4 Operating Temp.: -40 ~ 85°C RoHS Compliance
	ANT2535BSOXTGNL2S 25254 + 35354 GNSS+L2 Stack Antenna (1+0)	Freq. Range: 1227 & 1559-1610 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 5.1 dBic (GNSS)/5.4 dBic (L2) Axial Ratio: GNSS < 11, L5 < 7	Size (mm): 25*25*4 + 35*35*4 Operating Temp.: -40 ~ 85°C RoHS Compliance
	ANT2535BSOWTGNL2S 25253 + 35354 GNSS+L2 Stack Antenna (1+1)	Freq. Range: 1227 & 1559-1610 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 4.2 dBic (GNSS)/3.9 dBic (L2) Axial Ratio: GNSS < 10, L5 < 3	Size (mm): 25*25*3 + 35*35*4 Operating Temp.: -40 ~ 85°C RoHS Compliance
	ANT2835BSOWTGNL2S 28286 + 35358 GNSS+L2 Stack Antenna (2+2)	Freq. Range: 1227 & 1559-1610MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain : 3.2dBic(GNSS)/2.1dBic(L2) Axial Ratio: GNSS < 5, L5 < 5	Size(mm): 28*28*6 + 35*35*8 Operating Temp.: -40 ~ +85 °C RoHS Compliance

GNSS+L5

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT1825BSOXTGNL5S 18184 + 25254 GNSS+L5 Stack Antenna (1+1)	Freq. Range: 1176 & 1559-1610 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 4.5 dBic (GNSS)/2.6 dBic (L5) Axial Ratio: GNSS < 15, L5 < 3	Size (mm): 18*18*4 + 25*25*4 Operating Temp.: -40 ~ 85°C RoHS Compliance

LTCC RF Components

Antenna - GNSS+L5, GNSS+GPS+L2&L5, Active GPS, Active GPS+Glonass, Active GNSS+L2,L5

GNSS+L5

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT2535BSOXTGNL5S 25254 + 35354 GNSS+L2 Stack Antenna (1+0)	Freq. Range: 1176 & 1559-1610 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 5.6 dBic (GNSS)/3.0 dBic (L5) Axial Ratio: GNSS < 6, L5 < 4	Size (mm): 25*25*4 + 35*35*4 Operating Temp.: -40 ~ 85°C RoHS Compliance
	ANT2535BSOWTL1L5S 25253 + 35354 GNSS+L2 Stack Antenna (1+1)	Freq. Range: 1176 & 1559-1610 MHz VSWR*: 2.0 (Max) Polarization: RHCP Peak Gain: 3.7 dBic (GNSS)/2.3 dBic (L5) Axial Ratio: GNSS < 6, L5 < 5	Size (mm): 25*25*3 + 35*35*4 Operating Temp.: -40 ~ 85°C RoHS Compliance
	ANT2835BSOWTGNL5S 28286 + 35358 GNSS+L5 Stack Antenna (2+2)	Freq. Range: 1176 & 1559-1610MHz VSWR*: 2.0dB(Max) Polarization : RHCP Peak Gain: 3.0 dBic (GNSS)/2.3 dBic (L5) Axial Ratio: GNSS < 5, L5 < 5	Size(mm): 28*28*6 + 35*35*8 Operating Temp.: -40 ~ +105 °C RoHS Compliance

GNSS+GPS+L2&L5

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT4050BSOWTGNL5S 40404 + 50508 GNSS+GPS L2&L5 Stack Antenna	Freq. Range: 1176/1227 & 1559-1610Mhz VSWR*: 2.0 dB(Max) Polarization: RHCP Antenna Gain: L5:1.34 / L2:0.56 /GNSS : 4.73 dBi(Typ.)	Size (mm): 40*40*4 + 50*50*8 Operating Temp.: -40 ~ 105°C RoHS Compliance

Active GPS

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT2525JB08B1575A 25256.9 GPS Active Antenna	Freq. Range: 1575 MHz VSWR*: 2.0 dB(Max) Polarization: RHCP LNA Gain: 16 dB (Typ.) Antenna Gain: 5.5 dBic(Typ.)	Size (mm): 25*25*6.9 Cable* (mm): 1.13*75 Operating Temp.: -30 ~ 85°C RoHS Compliance

Active GPS+Glonass

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT8010JLC1B1516A 22061.9 GPS+Glonass Active Antenna	Freq. Range: 1575/1602 MHz VSWR*: 2.0 dB(Max) Polarization: Linear LNA Gain: 20 / 20 dB (Typ.) Antenna Gain: 5.88 dBi (Typ.)	Size (mm): 22*6*1.9 Cable* (mm): 1.13*100 Operating Temp.: -30 ~ 85°C RoHS Compliance

Active GNSS+L2, L5

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT1825JB01BGNL2A 252512 GNSS+L2 Active Antenna	Freq. Range: 1227 & 1559-1610 MHz VSWR*: 2.0 dB(Max) Polarization: RHCP LNA Gain: 38 dB (GNSS)/38 dB (L2) Antenna Gain: 2.0 dBic (GNSS)/2.5 dBic (L2)	Size (mm): 25*25*12 Operating Temp.: -40 ~ 105°C RoHS Compliance
	ANT1825JB01BGNL5A 252512 GNSS+L5 Active Antenna	Freq. Range: 1227 & 1559-1610 MHz VSWR*: 2.0 dB(Max) Polarization: RHCPz LNA Gain: 38 dB (GNSS)/38 dB (L2) Antenna Gain: 1.5 dBic (GNSS)/2.3 dBic (L5)	Size (mm): 25*25*12 Operating Temp.: -40 ~ 105°C RoHS Compliance

Active GNSS+L2, L5

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT4050JB01BGN25A 505015 GNSS+L2L5 Active Antenna	Freq. Range: 1176-1227 & 1559-1610 MHz VSWR*: 2.0 dB(Max) Polarization: RHCP LNA Gain: 38 dB (GNSS)/38 dB(L2)/38 dB (L5) Antenna Gain: 2.5 dBic (GNSS)/0.5 dBic (L2)/2.5 dBic (L5)	Size (mm): 50*50*15 Operating Temp.: -40 ~ 105°C RoHS Compliance

*VSWR depends on the environment

FM

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT2405F001R0098A 2405 FM Chip Antenna	Freq. Range: 88 MHz VSWR*: 2.0 dB(Max) Polarization: Linear Peak Gain: N/A	Size (mm): 24*5*1.6 Operating Temp.: -40 ~ 105°C RoHS Compliance

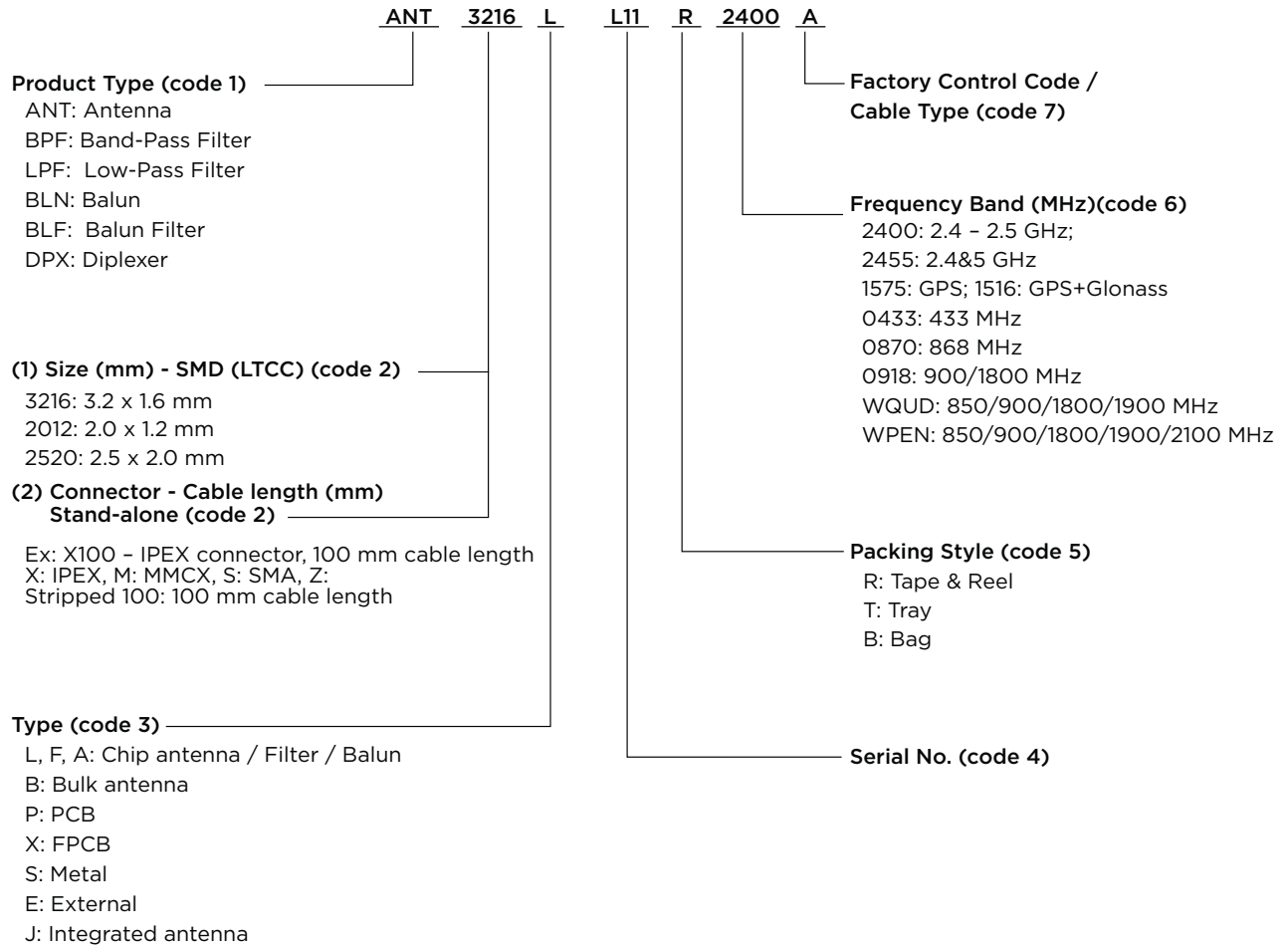
SDARS

Model	Part No./ Description	Electrical Data	Mechanical Data
	ANT2020B00FT2300S 20204 SDARS Patch Antenna	Freq. Range: 2320-2345 MHz VSWR*: 2.0 dB(Max) Polarization: LHCP Peak Gain: 6 dBic(Typ.)	Size (mm): 20*20*4 Operating Temp.: -40 ~ 105°C Mounting: PIN RoHS Compliance

*VSWR depends on the environment

Explanation of ordering code - New

Ordering example : ANT3216LL1R2400A





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