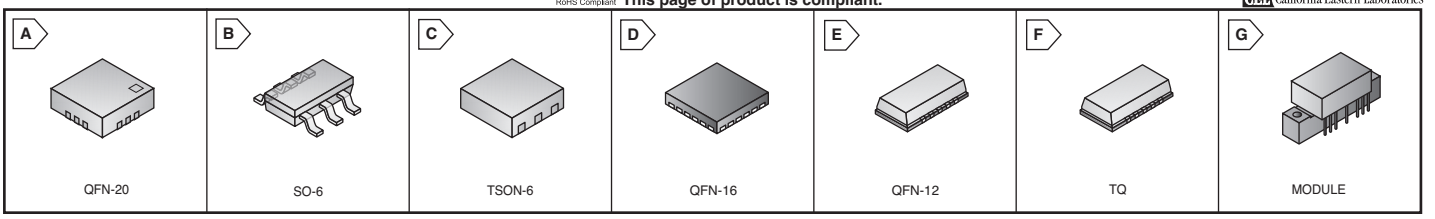
NEC/CEL Monolithic Microwave ICs

NEC

RoHS Compliant This page of product is compliant.

CEL California Eastern Laboratories



GAAS MONOLITHIC CIRCUITS

♦ Surface Mount

Electrical Characteristics (TA=25°C) NEC offers a broad range of gallium arsenide (GaAs) IC switches for medium to high power applications. They have the same high reliability, low cost technology found in NEC's discrete FET devices

RoHS Compliant

RF Switching ICs

For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	NEC/CEL Part No.	Fig.	Frequency Range (GHz)	Insertion Loss (dB)	Isolation @ 1 GHz (dB)	Isolation @ 2 GHz (dB)	RLIN Min./Typ. (dB)	RLOUT (Through) Min. (dB)	P1dB (dBm)	Switching Speed (ns)	VCONT Control Voltage (V)	Price Each 1	10	100	500
SPDT Single Control Switch															
♦ 551-UPD5713TK-A	UPG5713TK-A	A	0.05 to 2.5	0.8	25	22.5	13/17	13	+21	30	-0.5 to +4.6	.49	.46	.412	.374
♦ 551-UPG2015TB-A	UPG2015TB-A	B	0.5 to 2.5	0.3	28	25	---/20	20	+30	300	+6.0	1.35	1.16	1.00	.85
♦ 551-UPG2012TB-A	UPG2012TB-A	A	0.1 to 2.5	0.3	-	28	---/15	15	+24	300	+6.0	1.21	1.04	.90	.768
♦ 551-UPG2012TK-A	UPG2012TK-A	B	0.1 to 2.5	0.3	-	28	---/15	15	+24	300	+6.0	1.44	1.24	1.07	.91
♦ 551-UPG2010TB-A	UPG2010TB-A	B	0.1 to 2.5	0.35	28	25	---/15	15	+33	1000	+6.0	2.16	1.87	1.60	1.36
Broadband Switches															
♦ 551-UPG2157T5F-A	UPG2157T5F-A	A	2.3 to 5.85	0.6	-	25	---/20	20	>37	150	-6.0 to +6.0	1.89	1.63	1.40	1.19
♦ 551-UPG2162T5N-A	UPG2162T5N-A	C	2.4 to 2.5 4.9 to 6.0	0.6/0.85	-	30/27	---/15	15 (Typ)	31/29	150	3.0/0.0	1.44	1.24	1.06	.91
♦ 551-UPG2163T5N-A	UPG2163T5N-A	C	4.9 to 6.0	0.4/0.5	-	35/30	---/15	15	31/29	50	-6.0 to +6.0	1.20	1.04	.90	.77
♦ 551-UPG2164T5N-A	UPG2164T5N-A	C	2.4 to 2.5 4.9 to 6.0	0.5/0.7	-	25/17	---/15	15 (Typ)	31/29	50	-6.0 to +6.0	1.19	1.06	.92	.743

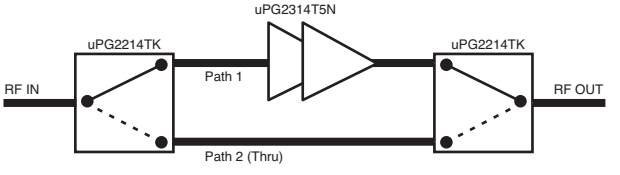
Low Noise Amplifier

For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	NEC/CEL Part No.	Fig.	Frequency Range (MHz)	Supply Voltage (V)	Total Current (mA)	Input Power (dBm)	Power Gain (dB)	ICC Typ. (mA)	Noise Figure (dB)	Input P1dB (dBm) (Typ.)	Total Power Dissipation (mW)	Price Each 1	10	100	500
♦ 551-UPG2311T5F-A	UPG2311T5F-A	A	1575	5.0	17	+10	37.0	17.0	1.2	+5	250	1.92	1.65	1.42	1.21

RANGE EXTENDING GAAS MONOLITHIC CIRCUITS

These devices (the NEC UPG2314T5N medium power amplifier and two UPG2214TK RF switches) can be used for a "range extension" application at 2.4GHz (such as for Bluetooth or ZigBee applications). With a 3V power supply and 0dBm of input power, this range extender will deliver 19dBm of output power (including the insertion loss of the switches and PCB), for a current draw of approximately 65mA. The "thru" path has approx. 1.4dB of loss (insertion loss of both switches + loss in the PCB). Please see the NEC/CEL RF IC Evaluation Boards page for evaluation boards (UPG2301TQ-ZBT-EV-A, UPG2314T5N-ZBT-EV-A and UPG2250T5N-EVAL-A) that are available for use in this type of application.



RoHS Compliant

♦ Surface Mount

RF Front-End IC for 2.4 GHz Bluetooth™, ZigBee, ISM Band

NEW PRODUCT

The UPG2353T6S is a RF front-end integrated circuit (FEIC) for Bluetooth Class 1, ZigBee, and ISM Band and includes TX/Bypass switches, a power amplifier, and a low-pass filter This device does not require any RF matching parts. The UPG2253T6S operates with 3.0 V supply and provides high efficiency and low harmonics.

For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	NEC/CEL Part No.	Fig.	Frequency Range (MHz)	Output Power (dBm)	Power Added Efficiency (%)	Package Style	Price Each 1	10	100	500
551-UPG2253T6S-A	UPG2253T6S-A	D	2400 to 2500	+19 TYP / -1.5TYP	28 TYP	QFN-16	3.63	3.07	2.65	2.47
551-UPG2253T6S-EVALA	UPG2253T6S-EVAL-A	- -	Engineering Evaluation Board				124.60	-	-	-

Power Amplifiers for Bluetooth Class1 and ZigBee

For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	NEC/CEL Part No.	Fig.	Operating Frequency (MHz)	Supply Voltage (V)	Total Current (mA)	Input Power (dBm)	Power Gain (dB)	AGC Control Current	AGC Control Voltage (V)	Variable Gain Range (dB) MIN.	Variable Gain Range (dB) MAX.	Total Power Dissipation (mW)	Price Each 1	10	100	500
♦ 551-UPG2250T5N-A	UPG2250T5N-A	C	2400 to 2500	1.8	250	+5.0	60.0	3.0mA	2.4	-	-	400	4.11	3.23	3.04	2.59
♦ 551-UPG2301TQ-A	UPG2301TQ-A	C	2400 to 2500	5.0	-	+10.0	23.0	0.5mA	3.6	20.0	23.0	700	3.80	3.23	2.91	2.59
♦ 551-UPG2314T5N-A	UPG2314T5N-A	E	2400 to 2500	3.0	-	+10.0	23.0	0.5mA	3.6	17.0	23.0	700	4.11	3.23	3.04	2.59

Power Amplifier for UHF to S-Band

For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	NEC/CEL Part No.	Fig.	Operating Frequency (MHz)	Supply Voltage (V)	Ref. Voltage Max (V)	Input Power Max (dBm)	Reference Current Max (mA)	Output Power Min (dBm)	Power Added Efficiency Min (%)	Total Power Dissipation (mW)	Price Each 1	10	100	500
♦ 551-UPG2118K-A	UPG2118K-A	F	800 to 2500	3.2	5.0	15.0	10.0	31.5	42	4	9.53	8.10	7.30	6.48

Power Doubler Amplifiers

For quantities of 1000 and up, call for quote.

MOUSER STOCK NO.	NEC/CEL Part No.	Fig.	Frequency Range (MHz)	Power Gain MIn (dB)	Power Gain Max. (dB)	Composite Triple Beat Typ.	Composite Triple Beat Max.	Composite 2nd Order Beat Typ.	Composite 2nd Order Beat Max.	Cross Mod (dBc) Typ.	Cross Mod (dBc) Max.	Operating Current Max. (mA)	Price Each 1	10	100	500
♦ 551-MC7893-AZ	MC7893-AZ	G	40 - 1000	22.5	24.0	-	-63	-	-65	-	60	385	91.18	75.98	67.54	57.41

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