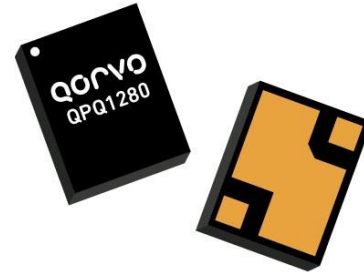


Applications

- Band 41
- Base Station Infrastructure
- Small Cells
- Repeaters
- Routers
- LTE Dongles
- General Purpose Wireless

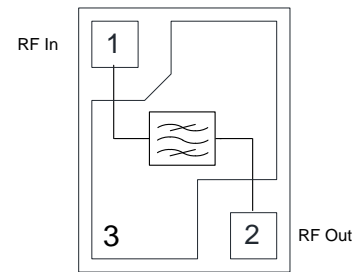


3 Pin 2 x 1.6 mm leadless SMT Package

Product Features

- 100 MHz Bandwidth – Band 41
- High Attenuation
- Low Loss
- No External Matching Required
- Excellent Wi-Fi Rejection
- Single Input, Single Output Operation
- Small Size: 2.00 x 1.60 x 0.73 mm
- Surface Mount Device
- RoHS Compliant, Pb-Free

Functional Block Diagram



Top View

General Description

The QPQ1280 is an exceptionally high performance BAW Filter for sub-Band 41 uplink / downlink. This filter is housed in a compact 2 x 1.6 mm package for base station applications.

Low insertion loss, coupled with high attenuation makes this filter an ideal choice for TDD Macro Cells and Small Cells.

The QPQ1280 is part of Qorvo's extensive portfolio of RF BAW and SAW filters.

Pin Configuration

Pin No.	Label
1	RF In
2	RF Out
3	GND

Ordering Information

Part No.	Description
QPQ1280	Band 41 Filter
QPQ1280-EVB	Evaluation Board

Standard T/R size = 2500 pieces on a 7" reel

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to +125 °C
Operation Temperature	-40 to +95 °C
Max DC Voltage	+5 V

Operation of this device outside the parameter ranges may cause permanent damage.

Life Test

Conditions	Rating
+29 dBm, +95 °C, FD-LTE, 5MHz 16QAM, 5MHz, PAR=8.5dB	>93.7K Hrs
+29 dBm, +85 °C, FD-LTE, 5MHz 16QAM, 5MHz, PAR=8.5dB	>269.5K Hrs
+24 dBm, +95 °C, FD-LTE, 5MHz 16QAM, 5MHz, PAR=8.5dB	>1.1M Hrs

Power is applied to Pin1.

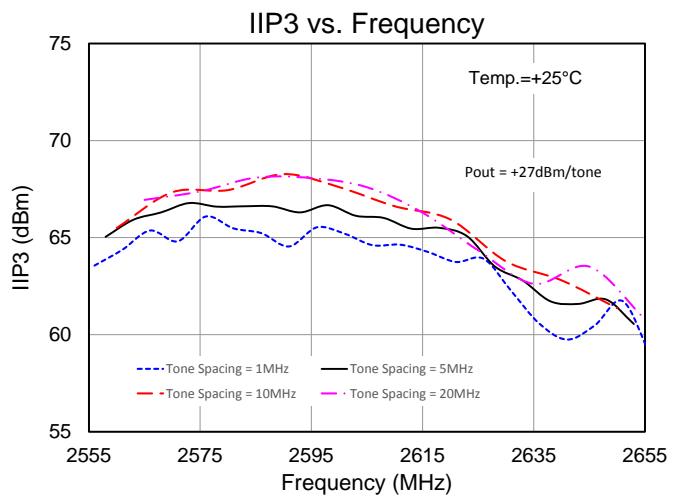
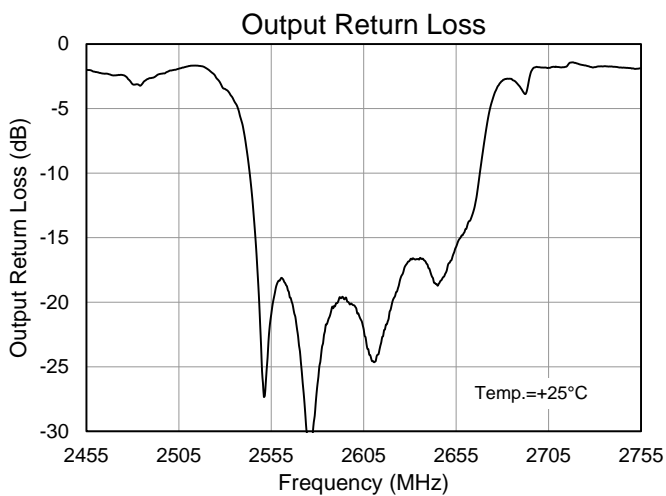
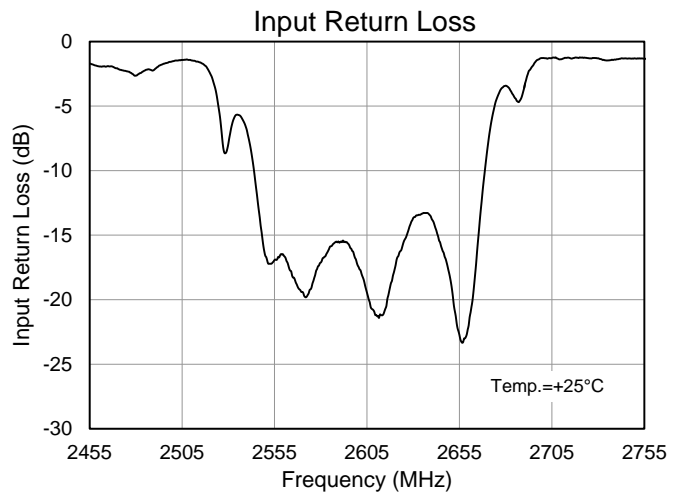
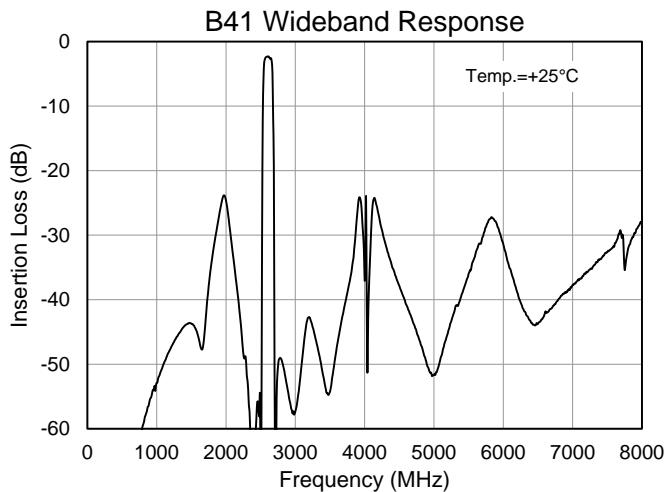
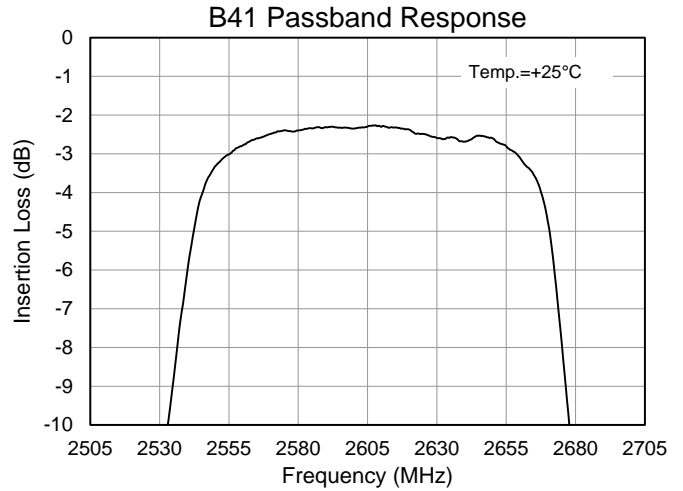
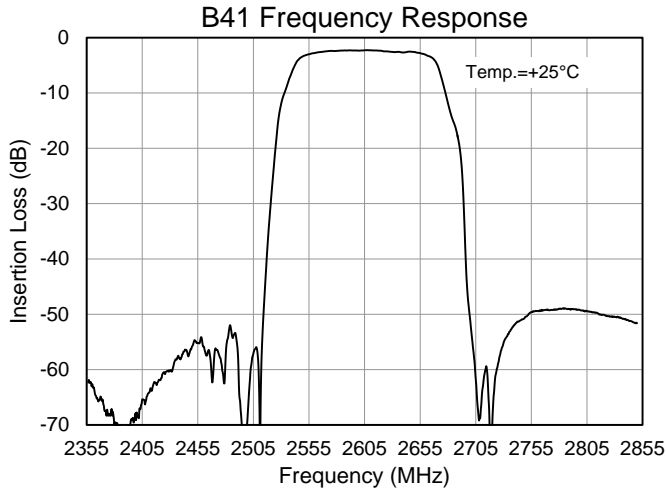
Electrical Specifications

Operating Temperature Range: -40 to +95 °C

Parameter	Conditions	Min	Typ	Max	Units
Passband		2555	-	2655	MHz
Insertion Loss	At +25 °C	-	2.0	2.9	dB
		-	3.0	4.0	
Amplitude Variation	At +25 °C	-	0.4	1.1	dB
		-	0.7	1.7	
Attenuation	10–700 MHz	41	46	-	dB
	701–900 MHz	27	32	-	
	901–1564 MHz	22	27	-	
	1565–1615 MHz	35	40	-	
	1616–1709 MHz	35	41	-	
	1710–1880 MHz	26	31	-	
	1920–2170 MHz	20	24	-	
	2300–2330 MHz	35	40	-	
	2400–2483 MHz	45	50	-	
	2720–3000 MHz	15	20	-	
	3000-3800MHz	30	35	-	
	3800-4700MHz	16	25	-	
4700-5500MHz	33	38	-		
5500-6300MHz	23	28	-		
6300-7500MHz	25	30	-		
7500–8000 MHz	10	27	-		
Return Loss	Input/Output Port	10	15	-	dB
Group delay Variation			21	40	nS
PIM	IIP3		+60		dBm
2 nd Harmonic	Pin = +29 dBm		55		dBc
3 rd Harmonic	Pin = +29 dBm		90		dBc

Performance Plots

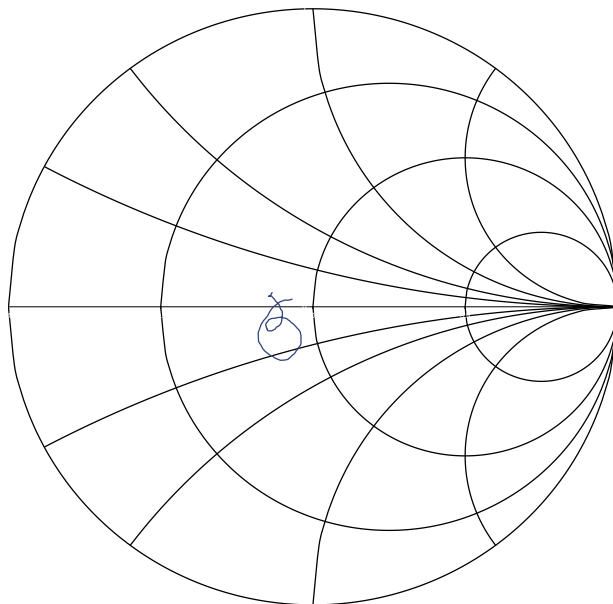
Test conditions unless otherwise noted: Temp= +25°C



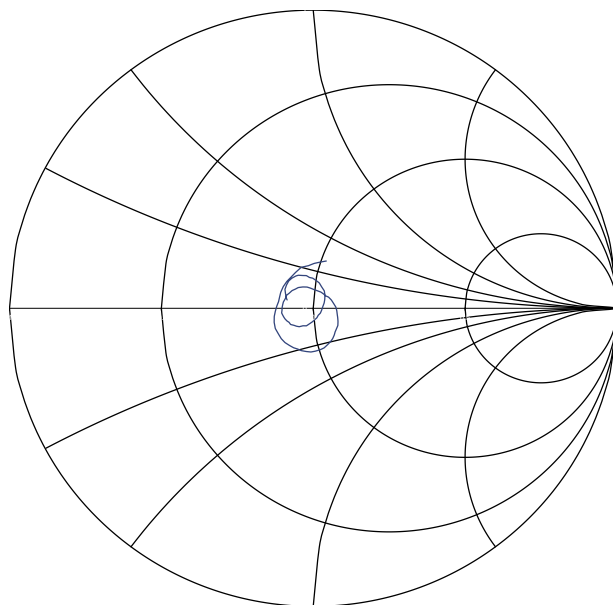
Performance Plots (continued)

Test conditions unless otherwise noted: Temp= +25°C

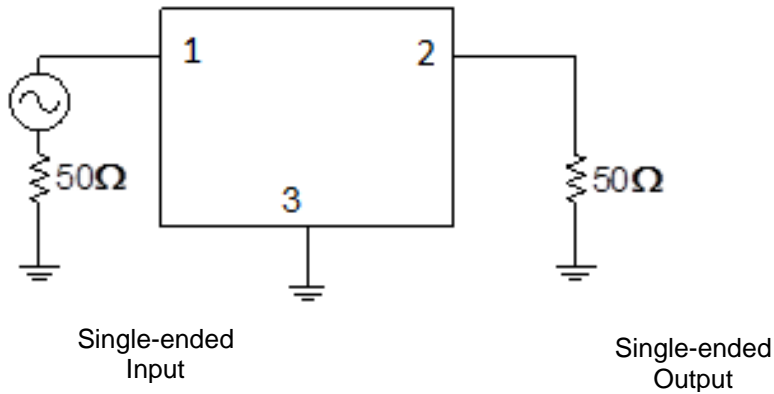
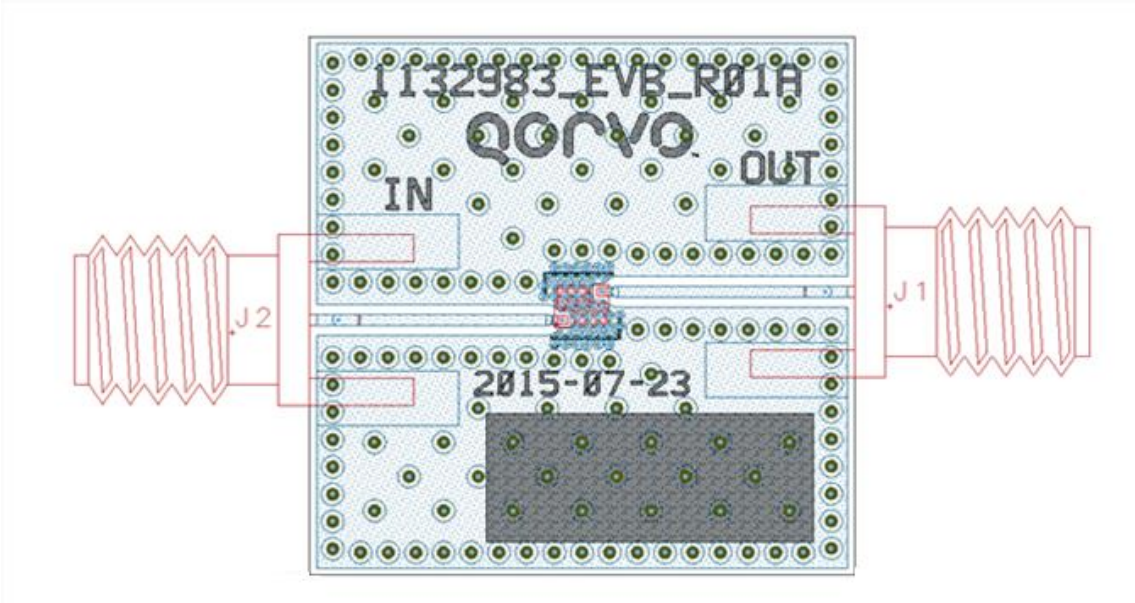
Input VSWR



Output VSWR



QPQ1280-PCB Evaluation Board



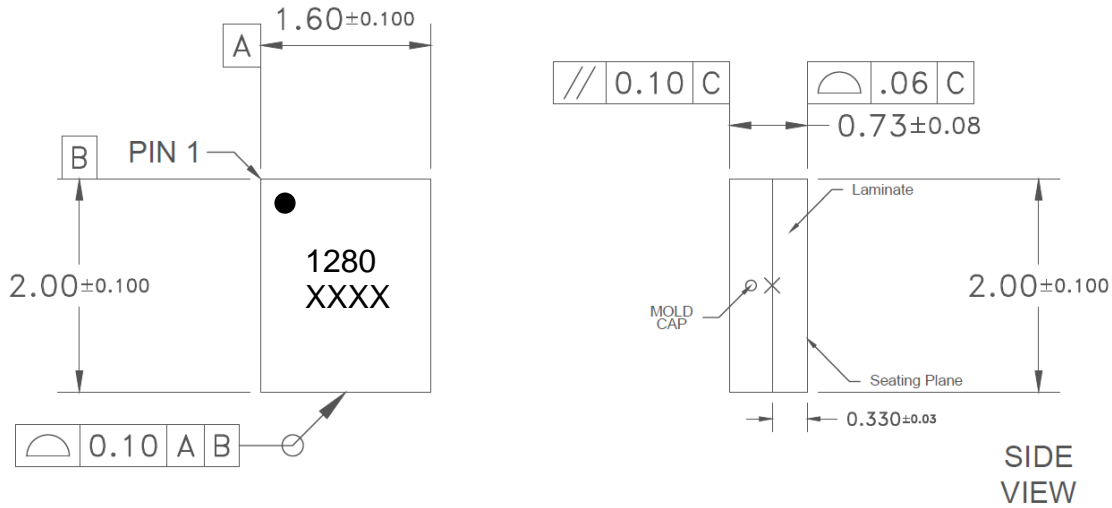
Bill of Material – QPQ1280-PCB

Reference Des.	Value	Description	Manuf.	Part Number
U1	n/a	Band 41 BAW Filter	Qorvo	QPQ1280
n/a	n/a	Printed Circuit Board	Qorvo	1132983
n/a	n/a	SMA Edge Connector	Radiall	9602-1111-018

Package Marking and Dimensions

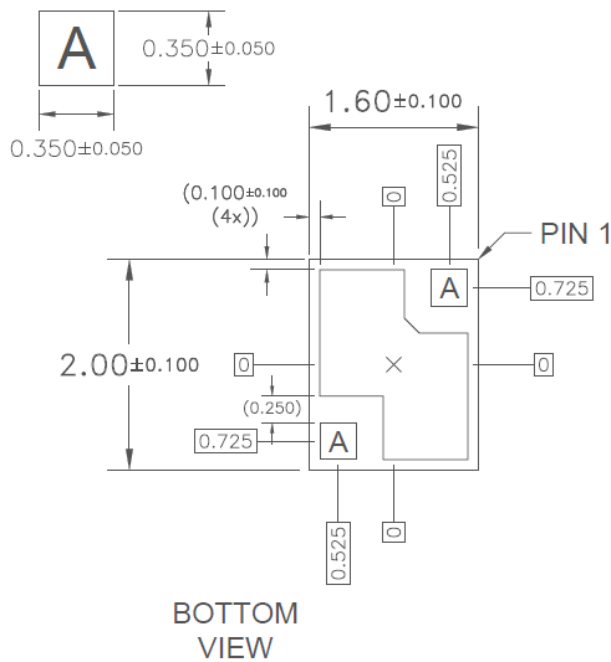
Package Marking

Product Identifier: 1280
 Assembly Code: XXXX

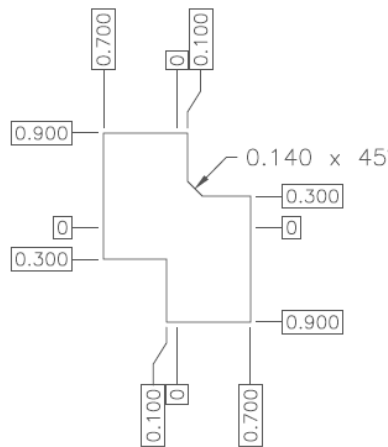


TOP VIEW

DETAIL A
 PAD
 2x THIS ROTATION



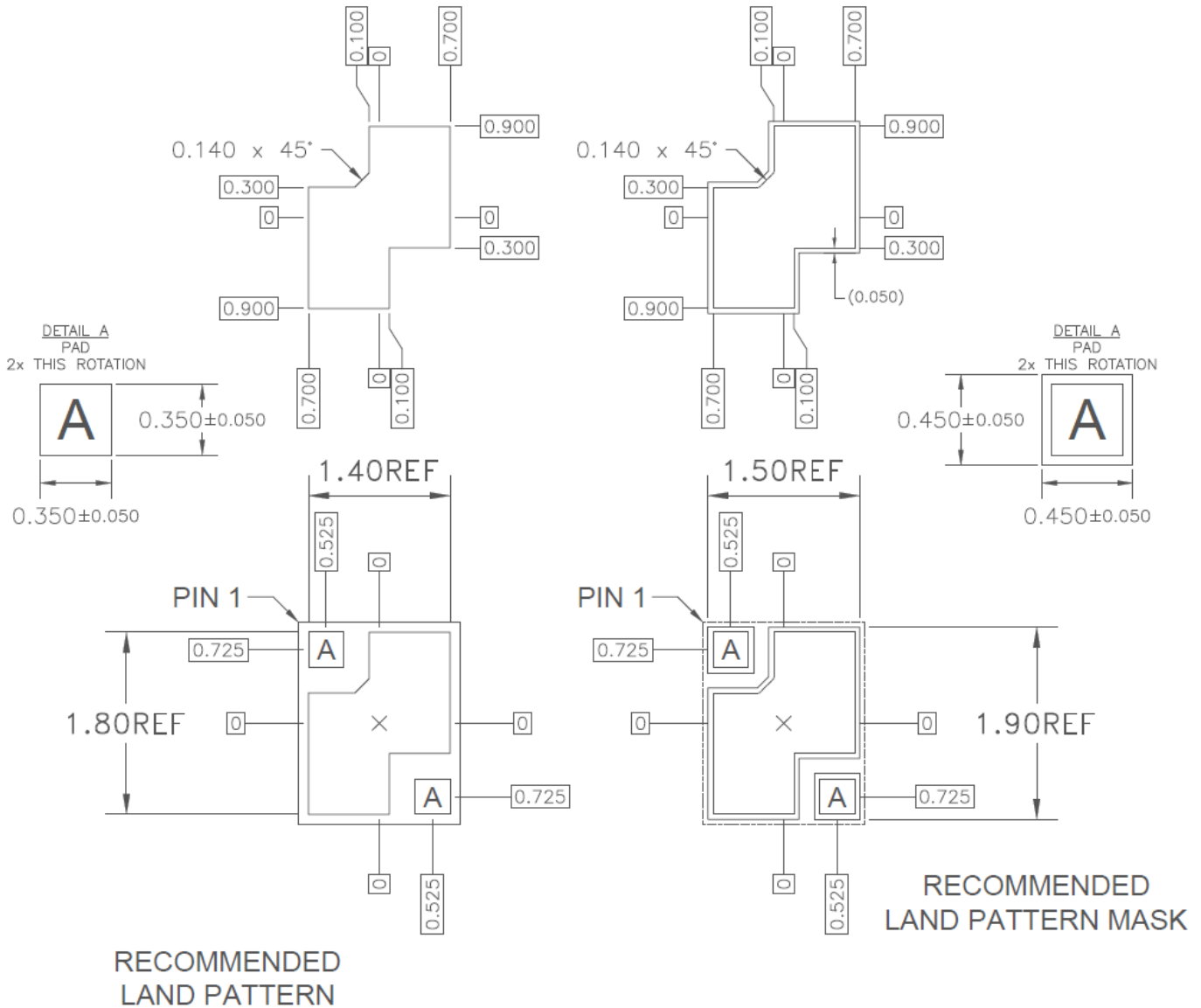
BOTTOM VIEW



Notes:

1. All dimensions are in millimeters. Angles are in degrees.
2. Dimension and tolerance formats conform to ASME Y14.4M-1994.
3. The terminal #1 identifier and terminal numbering conform to JESD 95-1 SPP-012.

PCB Mounting Pattern

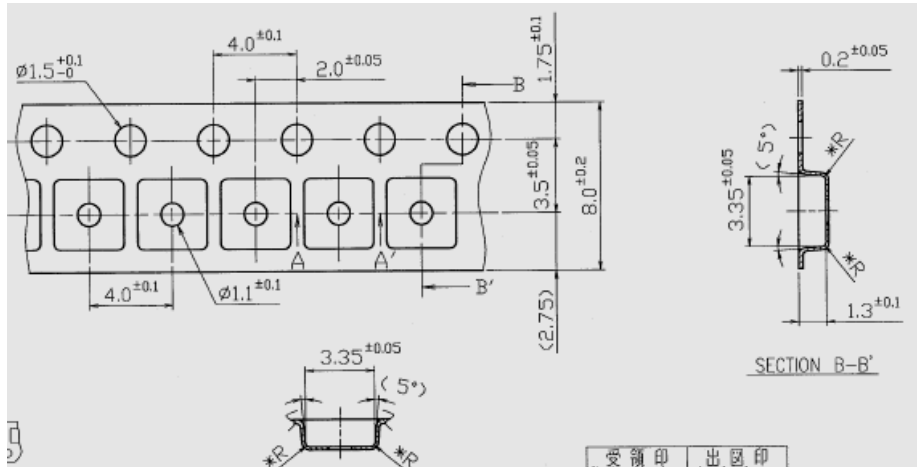


Notes:

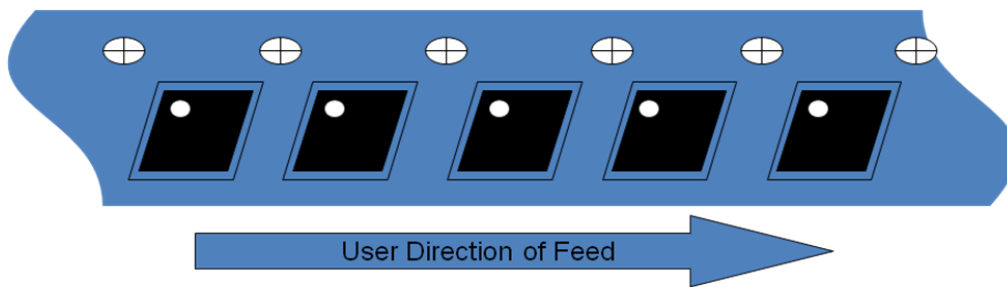
1. All dimensions are in millimeters. Angles are in degrees.
2. Use 1 oz. copper minimum for top and bottom layer metal.

Tape and Reel Information – Carrier and Cover Tape Dimensions

Tape and reel specifications for this part are also available on the Qorvo website.
 Standard T/R size = 2500 pieces on a 7” reel.

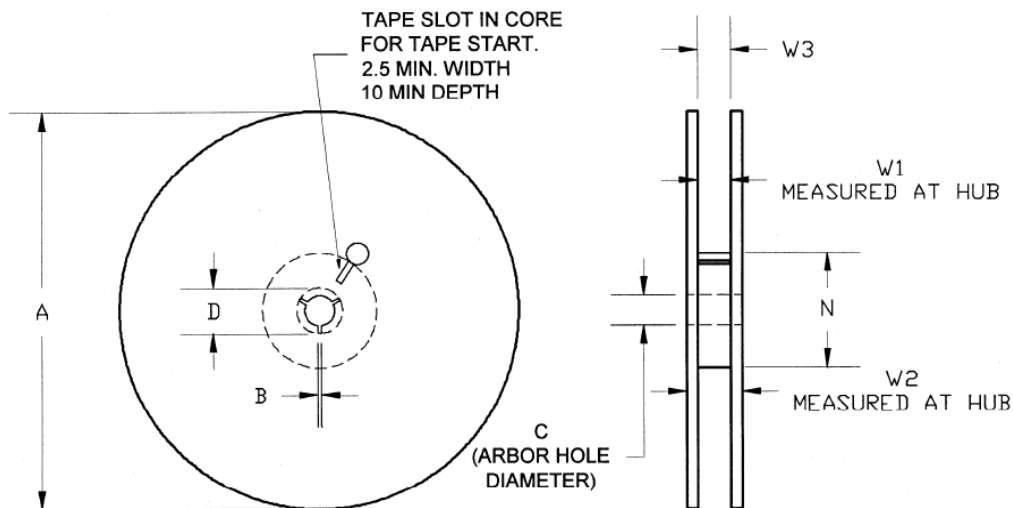


Feature	Measure	Symbol	Size (in)	Size (mm)
Cavity	Length	A0	0.092	2.34
	Width	B0	0.112	2.85
	Depth	K0	0.043	1.10
	Pitch	P1	0.157	4.00
Centerline Distance	Cavity to Perforation - Length Direction	P2	0.079	2.00
	Cavity to Perforation - Width Direction	F	0.138	3.50
Cover Tape	Width	C	0.213	5.40
Carrier Tape	Width	W	0.315	8.00



Tape and Reel Information – Reel Dimensions

Tape and reel specifications for this part are also available on the Qorvo website.
Standard T/R size = 2,500 pieces on a 7" reel.



Feature	Measure	Symbol	Size (in)	Size (mm)
Flange	Diameter	A	6.969	177.0
	Thickness	W2	0.559	14.2
	Space Between Flange	W1	0.346	8.8
Hub	Outer Diameter	N	2.283	58.0
	Arbor Hole Diameter	C	0.512	13.0
	Key Slit Width	B	0.079	2.0
	Key Slit Diameter	D	0.787	20.0

Product Compliance Information

ESD Sensitivity Ratings



Caution! ESD-Sensitive Device

ESD Rating: Class 1C
Value: ≥ 1000 V to < 2000 V
Test: Human Body Model (HBM)
Standard: ESDA/JEDEC Standard JS-001-2012

ESD Rating: Class C3
Value: ≥ 1000 V
Test: Charge Device Model (CDM)
Standard: JEDEC Standard JS-002-2014

MSL Rating

MSL Rating: Level 3
Test: 260°C convection reflow
Standard: JEDEC Standard IPC/JEDEC J-STD-020

Solderability

Compatible with both lead-free (260°C maximum reflow temperature) and tin/lead (245°C maximum reflow temperature) soldering processes.

Contact plating: ENIG (Electroless Nickel Immersion Gold)

RoHS Compliance

This part is compliant with EU 2002/95/EC RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment).

This product also has the following attributes:

- Lead Free
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A (C₁₅H₁₂Br₄O₂) Free
- PFOS Free
- SVHC Free

Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

Web: www.triquint.com
Email: customer.support@qorvo.com

Tel: 1-844-890-8163

For information about the merger of RFMD and TriQuint as Qorvo:

Web: www.qorvo.com

For technical questions and application information:

Email: sjapplications.engineering@qorvo.com

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