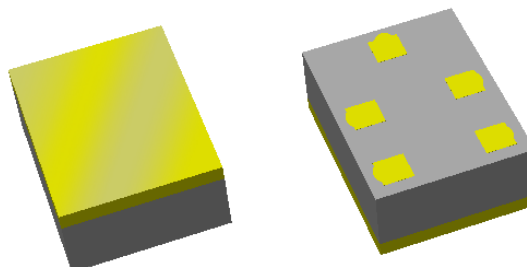


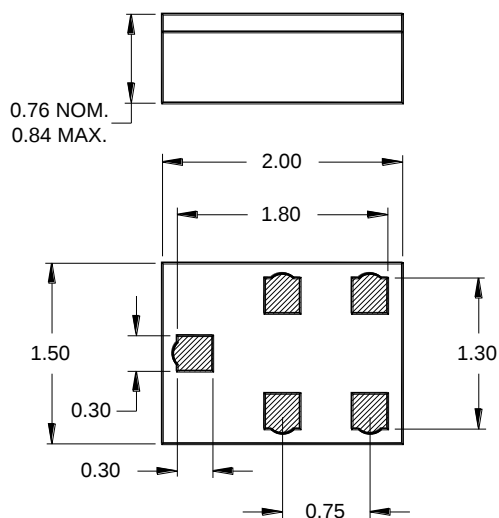
Features

- L2 filter for GPS applications
- Usable bandwidth of 20 MHz
- Low loss
- No impedance matching required for operation at 50Ω
- Ceramic Chip Scale Package (CSP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



Package

Surface Mount 2.00 x 1.50 x 0.76 mm
CSP-8B

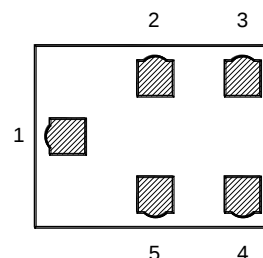


Dimensions shown are nominal in millimeters
All tolerances are ± 0.10 mm

Body: Al_2O_3 ceramic
Lid: Kovar or Alloy 42, Au over Ni plated
Terminations: Au plating 0.5 - 1.0μm,
over a 2 - 6μm Ni plating

Pin Configuration

Bottom View



Single-ended Configuration

Pin No.	Description
1	Input
4	Output
2,3,5	Case ground

Electrical Specifications ⁽¹⁾

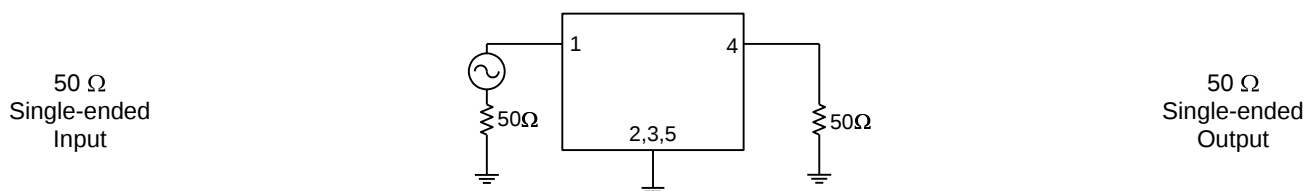
Operating Temperature Range: ⁽²⁾ -55 to +105 °C

Parameter ⁽³⁾	Minimum	Typical ⁽⁴⁾	Maximum	Unit
Center Frequency	-	1227.6	-	MHz
Minimum Insertion Loss	-	1.1	1.5	dB
3 dB Bandwidth	20	31	-	MHz
Amplitude Ripple ⁽⁵⁾ 1217.6 - 1237.6 MHz	-	0.5	2.0	dB p-p
Absolute Group Delay 1217.6 - 1237.6 MHz	16	21	26	ns
Group Delay Variation 1217.6 - 1237.6 MHz	-	10	25	ns
Absolute Attenuation ⁽⁵⁾ 300 - 1152 MHz	25	27	-	dB
1302 - 1900 MHz	25	33	-	dB
1900 - 3000 MHz	25	28	-	dB
Input/Output Return Loss 1217.6 - 1237.6 MHz	9	10	-	dB
Source Impedance ⁽⁶⁾	-	50	-	Ω
Load Impedance ⁽⁶⁾	-	50	-	Ω

Notes:

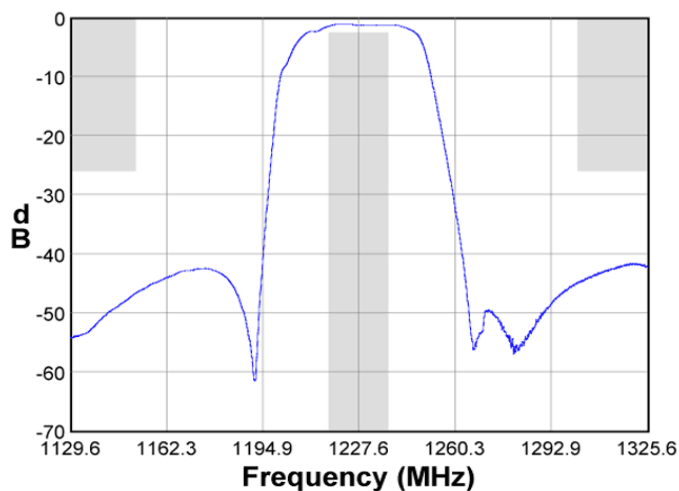
1. All specifications are based on the TriQuint test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. Typical values are based on average measurements at room temperature
5. Relative to minimum insertion loss
6. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

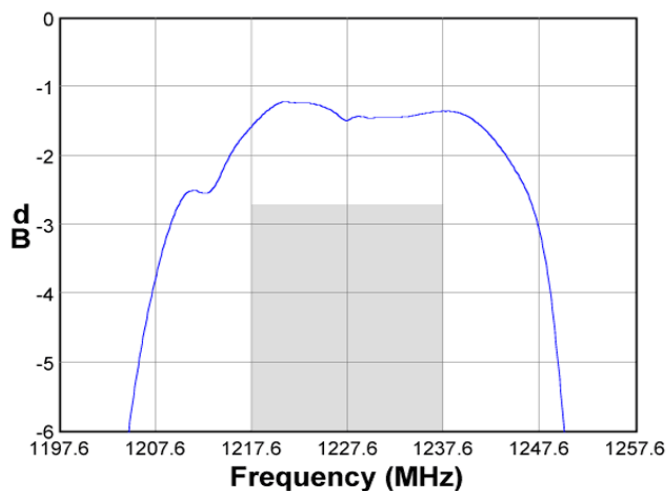


Typical Performance (at room temperature)

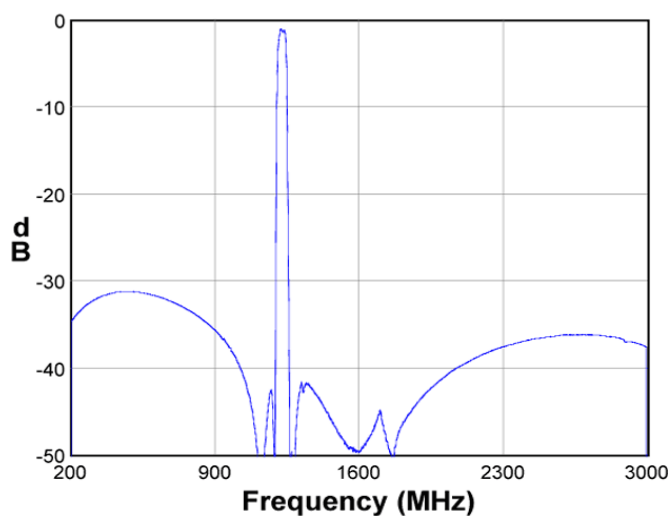
Frequency Response



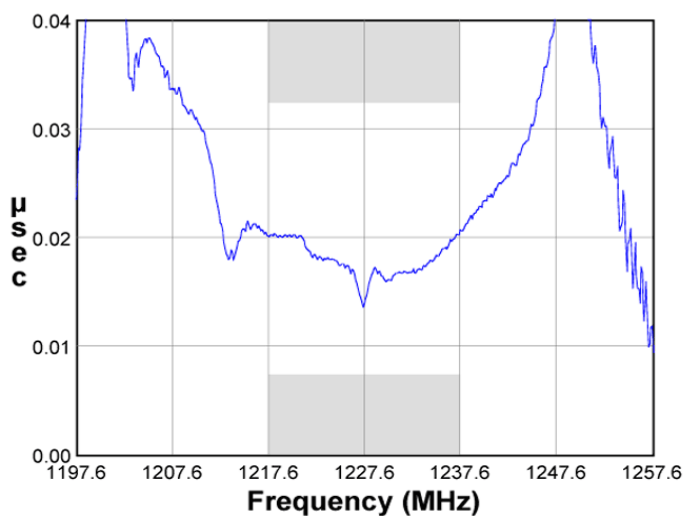
Passband Response



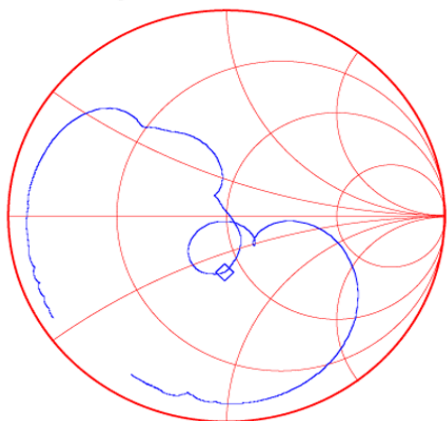
Wideband Response



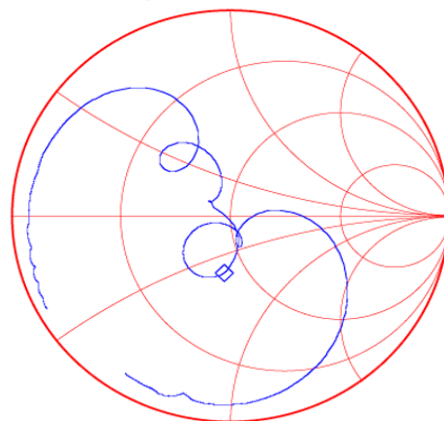
Group Delay Response



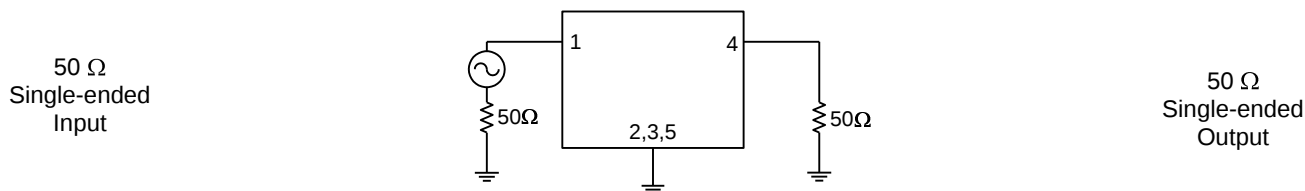
Input Smith Chart



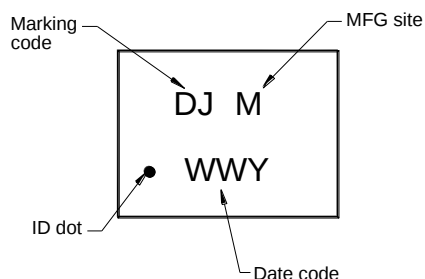
Output Smith Chart



Matching Schematics

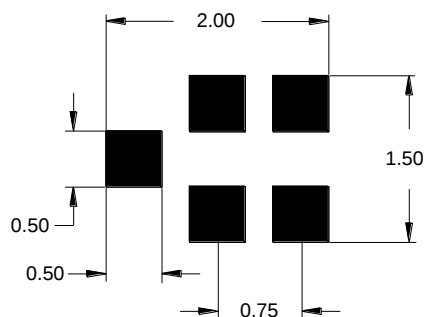


Marking



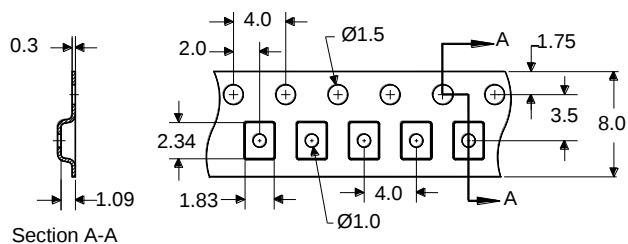
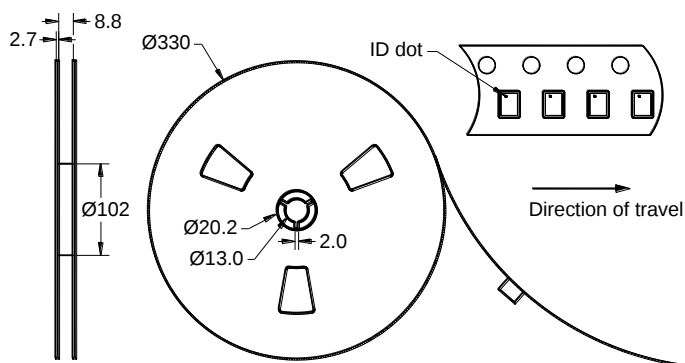
The date code consists of: WW = 2 digit week,
Y = last digit of year, M = manufacturing site code

PCB Footprint



This footprint represents a recommendation only
Dimensions shown are nominal in millimeters

Tape and Reel



Dimensions shown are nominal in millimeters
Packaging quantity: 10000 units/reel

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-55	+105	°C
Storage Temperature Range	T _{stg}	-55	+105	°C

Important Notes

Warnings

- Electrostatic Sensitive Device (ESD)
- Avoid ultrasonic exposure



RoHS Compliance

- This product complies with EU directive 2002/95/EC (RoHS)



Solderability

- Compatible with JESD22-B102, Pb-free process, 260C peak reflow temperature ([see soldering profile](#))

Links to Additional Technical Information

[PCB Layout Tips](#)

[Qualification Flowchart](#)

[Soldering Profile](#)

[S-Parameters](#)

[RoHS Information](#)

[Other Technical Information](#)

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[Representatives or distributors](#)