
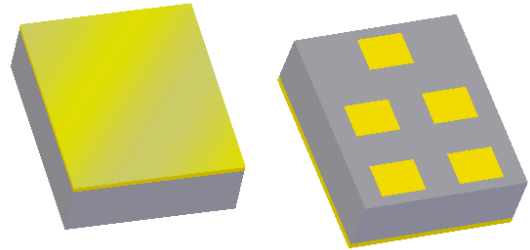


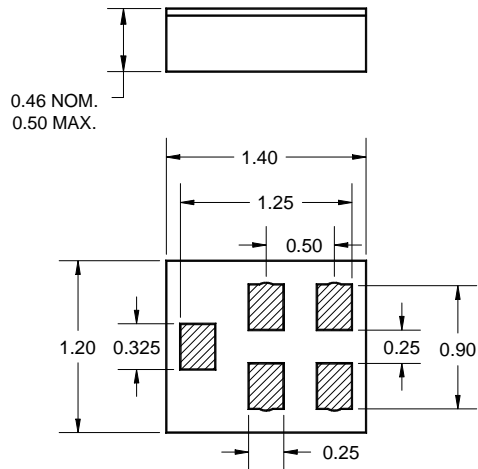
Features

- Ultra-Low Loss
- For GPS applications
- Single-ended operation
- Small Size
- Usable bandwidth 2.4 MHz
- Ceramic chip-scale Package (CSP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



Package

Surface Mount 1.40 x 1.20 x 0.46 mm
CSP-5BT

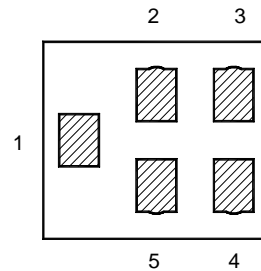


Dimensions shown are nominal in millimeters
All tolerances are ± 0.10 mm

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

Pin Configuration

Bottom View



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

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -30 to +85 °C

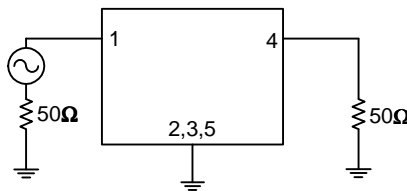
Parameter ⁽³⁾	Minimum	Typical ⁽⁴⁾	Maximum	Unit
Center Frequency	-	1575.42	-	MHz
Maximum Insertion Loss 1574.22 – 1576.62 MHz	-	0.6	0.8	dB
Amplitude Variation 1574.22 – 1576.62 MHz	-	0.02	0.2	dB p-p
Absolute Attenuation 824 – 960 MHz	21	22	-	dB
1500 – 1525.42 MHz	21	34	-	dB
1625.42 – 1650 MHz	21	34	-	dB
1710 – 2170 MHz	23	24	-	dB
Input/Output Return Loss 1574.22 – 1576.62 MHz	15	23	-	dB
Source Impedance (single-ended) ⁽⁵⁾	-	50	-	Ω
Load Impedance (single-ended) ⁽⁵⁾	-	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. This is the optimum impedance in order to achieve the performance shown

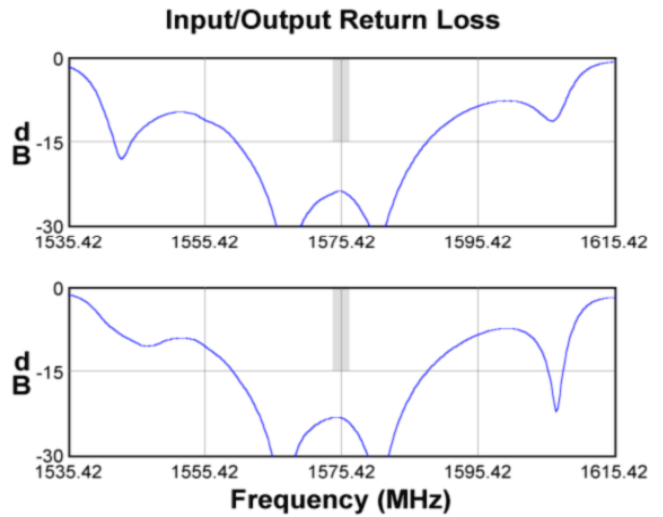
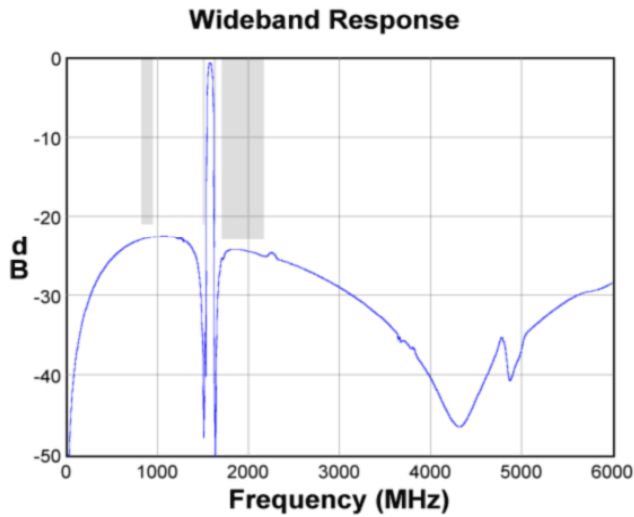
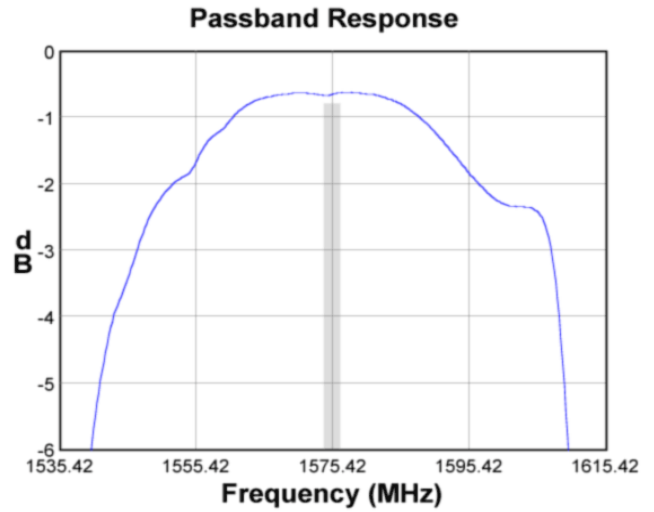
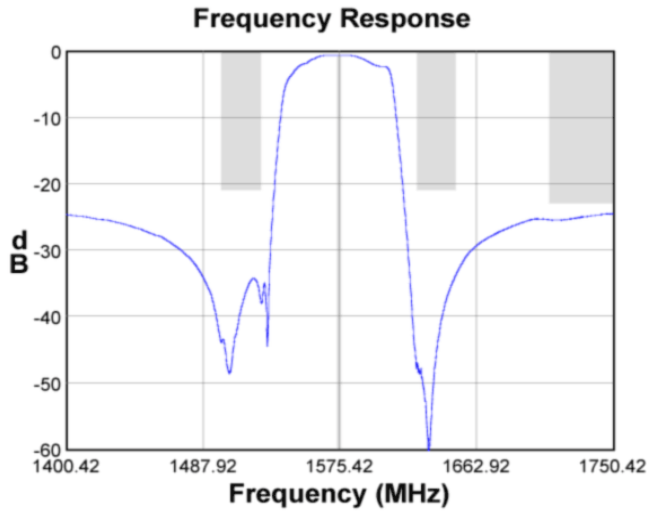
Test Circuit:

50 Ω
Single-ended
Input
No impedance matching
required

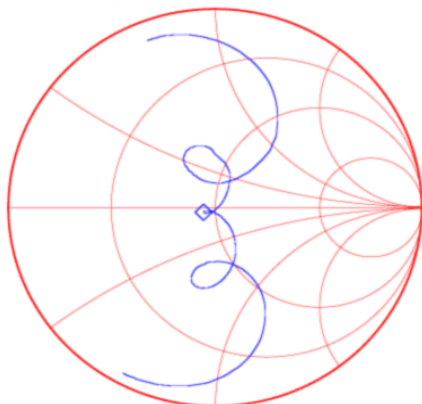


50 Ω
Single-ended
Output
No impedance matching
required

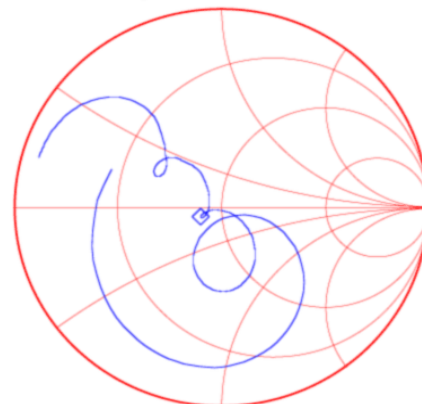
Typical Performance (at room temperature)



Input Smith Chart

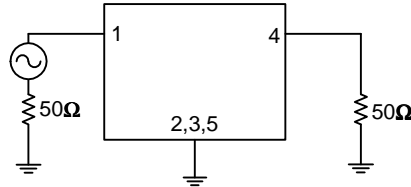


Output Smith Chart



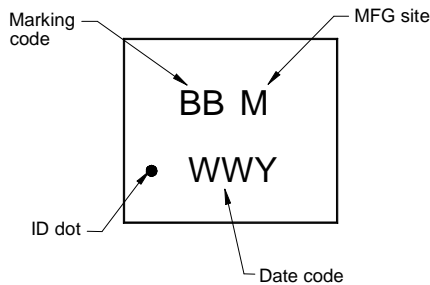
Matching Schematics

50 Ω
Single-ended
Input
No impedance matching
required



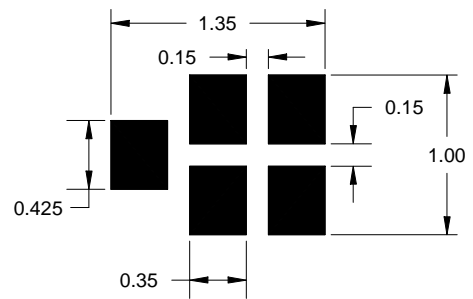
50 Ω
Single-ended
Output
No impedance matching
required

Marking



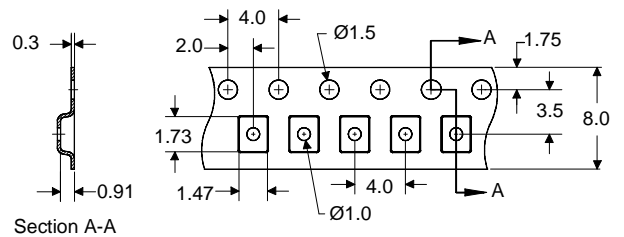
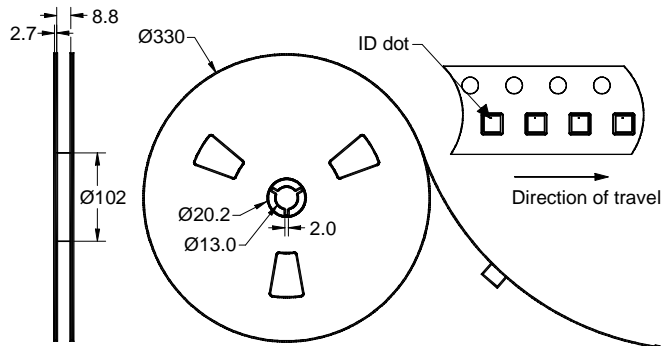
The date code consists of: WW = 2 digit week,
Y = last digit of year, M = manufacturing site code

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	-30	+85	°C
Storage Temperature Range	T _{stg}	-40	+85	°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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