
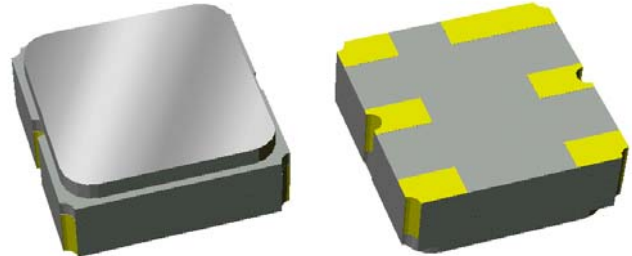


Data Sheet

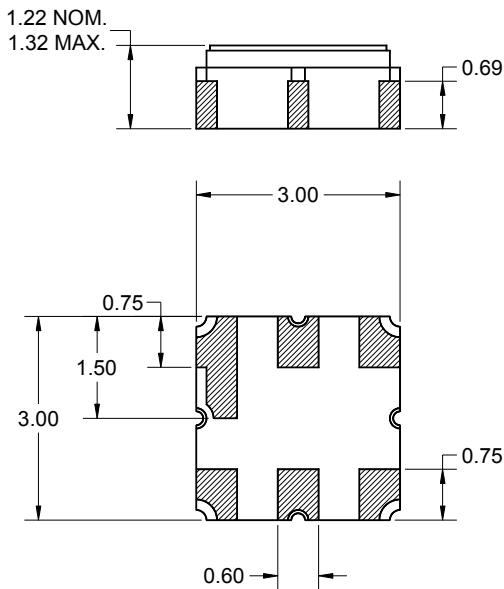
Features

- For AMPS, CDMA and TDMA applications
- Usable bandwidth 60 MHz
- High attenuation
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



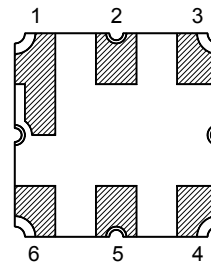
Package

Surface Mount 3.00 x 3.00 x 1.22 mm



Pin Configuration

Bottom View



Pin No.	Description
2	Input
5	Output
1,3,4,6	Ground

Dimensions shown are nominal in millimeters
All tolerances are ±0.15mm except overall
length and width ±0.10mm

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

Data Sheet

Electrical Specifications ⁽¹⁾

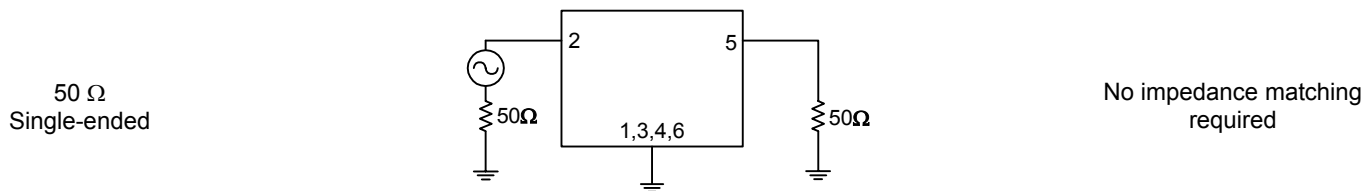
Operating Temperature Range: ⁽²⁾ -40 to +85 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1960	-	MHz
Maximum Insertion Loss				
1930 - 1990 MHz	-	2.1	4.5	dB
1930 - 1990 MHz (+25 °C)	-	2.1	3.3	dB
Passband Ripple				
1930 - 1990 MHz	-	0.3	3.5	dB p-p
1930 - 1990 MHz (+25 °C)	-	0.4	2.4	dB p-p
Absolute Attenuation				
10 - 1850 MHz	20	22	-	dB
1850 - 1910 MHz (-30 to +85 °C)	12	27	-	dB
1850 - 1910 MHz	10.3	27	-	dB
2040 - 2100 MHz	25	26	-	dB
2150 - 2210 MHz	20	24	-	dB
2210 - 4000 MHz	15	25	-	dB
Input/Output Return Loss				
1930 - 1990 MHz	7.4	11	-	dB
Source Impedance ⁽⁴⁾	-	50	-	Ω
Load Impedance ⁽⁴⁾	-	50	-	Ω

Notes:

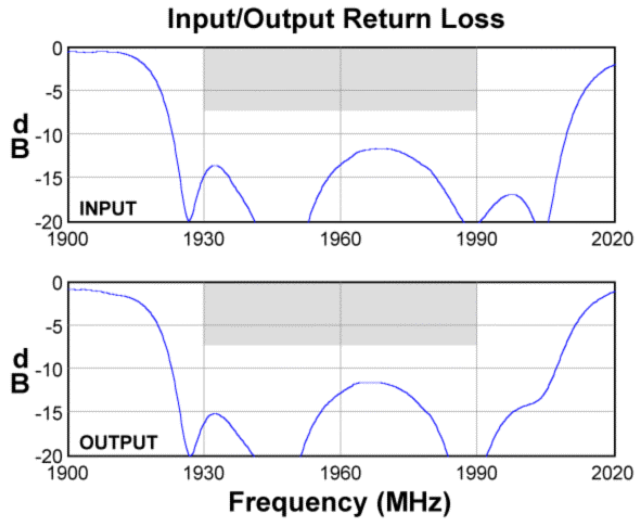
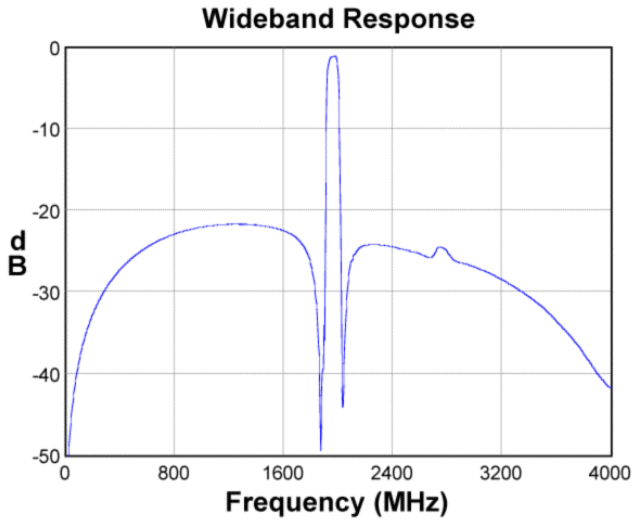
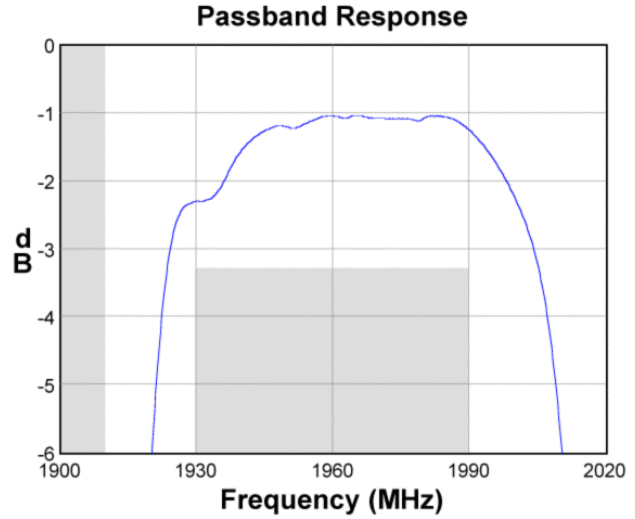
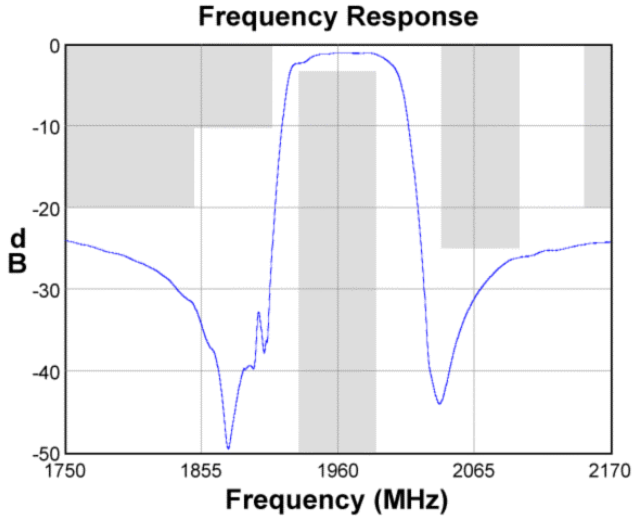
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

Test Circuit:

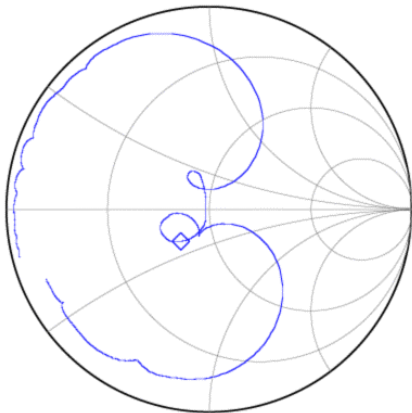


Data Sheet

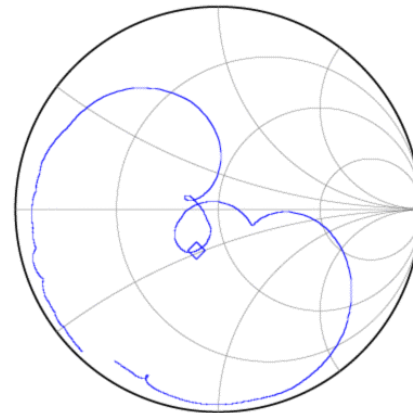
Typical Performance (at +25°C)



Input Smith Chart



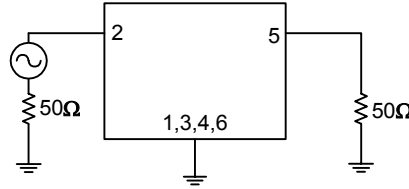
Output Smith Chart



Data Sheet

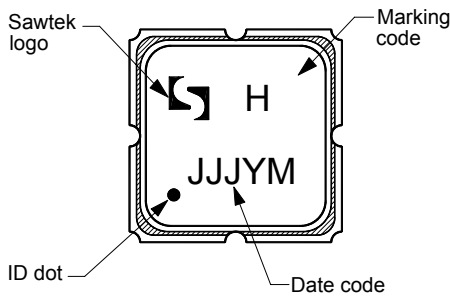
Matching Schematics

50 Ω
Single-ended

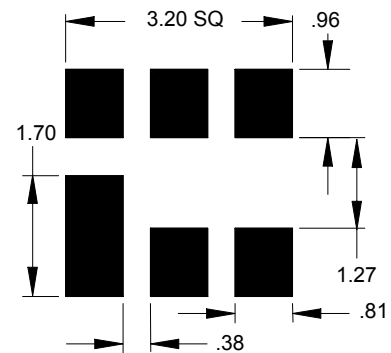


No impedance matching required

Marking PCB Footprint

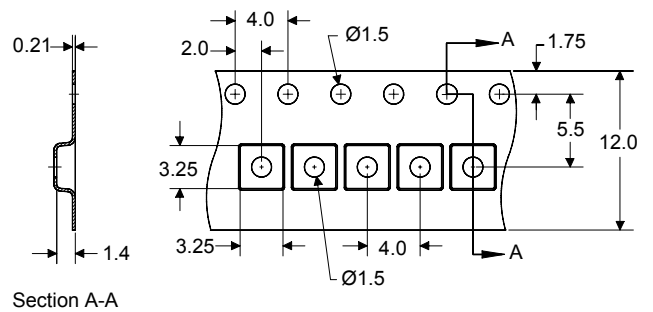
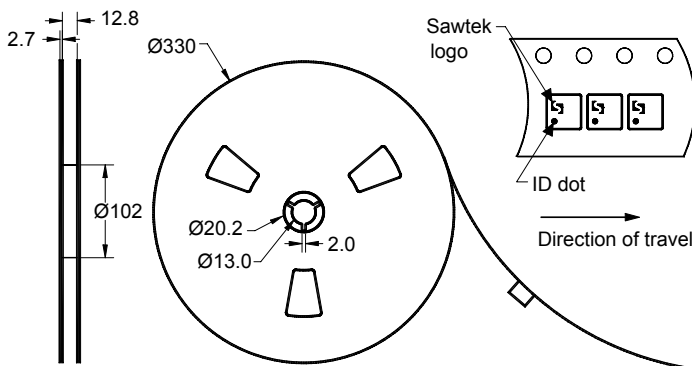


The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code



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

Tape and Reel



Dimensions shown are nominal in millimeters
Packaging quantity: 5000 units/reel


Data Sheet

Maximum Ratings


Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-40	+85	°C
Storage Temperature Range	T _{stg}	-40	+85	°C
RF Power	P _{in}	-	+13	dBm

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 JEDEC J-STD-020C **Pb**-free process, **260°C** 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](#)