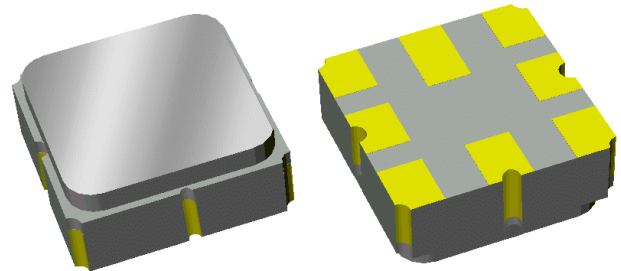


Data Sheet

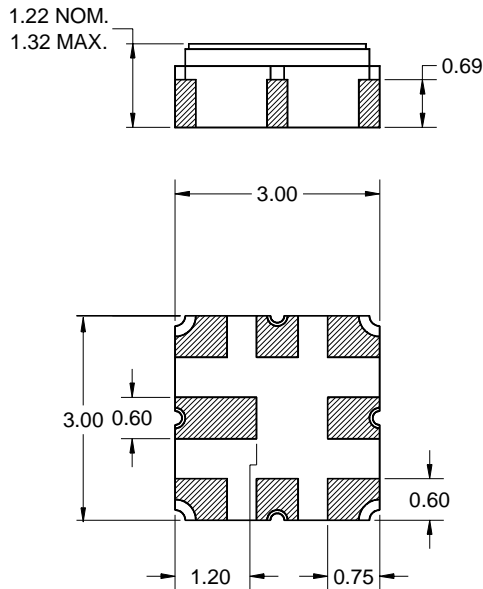
Features

- For PCS applications
- Usable bandwidth 30 MHz (each band)
- Low loss
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size

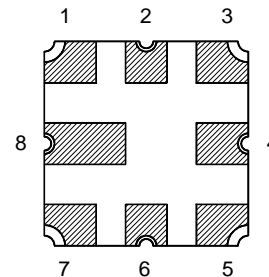


Package

Surface Mount 3.0 x 3.0 x 1.22 mm



Pin Configuration



Pad No.	Description
1	Input band #1
3	Input band #2
5	Output band #2
7	Output band #1
2,4,6,8	Case ground

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

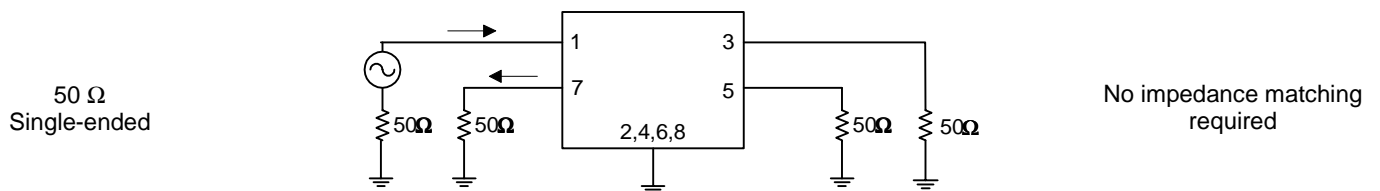
Body: Al_2O_3 ceramic
 Lid: Kovar, Ni plated
 Terminations: Au plating 0.5 - 1.0µm,
 over a 2 - 6µm Ni plating

Data Sheet
Band #1 Electrical Specifications ⁽¹⁾
Operating Temperature Range: ⁽²⁾ -40 to +85 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1865	-	MHz
Maximum Insertion Loss 1850 - 1880 MHz	-	2	2.5	dB
Passband Ripple 1850 - 1880 MHz	-	0.4	1.5	dB p-p
Absolute Attenuation DC - 1770 MHz	25	28	-	dB
1770 - 1800 MHz	23	38	-	dB
1930 - 1960 MHz	35	40	-	dB
1960 - 2040 MHz	25	33	-	dB
2040 - 2100 MHz	30	34	-	dB
2100 - 3000 MHz	25	34	-	dB
Input/Output Return Loss 1850 - 1880 MHz	10	16.5	-	dB
Terminating Source Impedance: ⁽⁴⁾	-	50	-	Ω
Terminating Load Impedance: ⁽⁴⁾	-	50	-	Ω
Operating Temperature Range	-40	+25	+85	°C

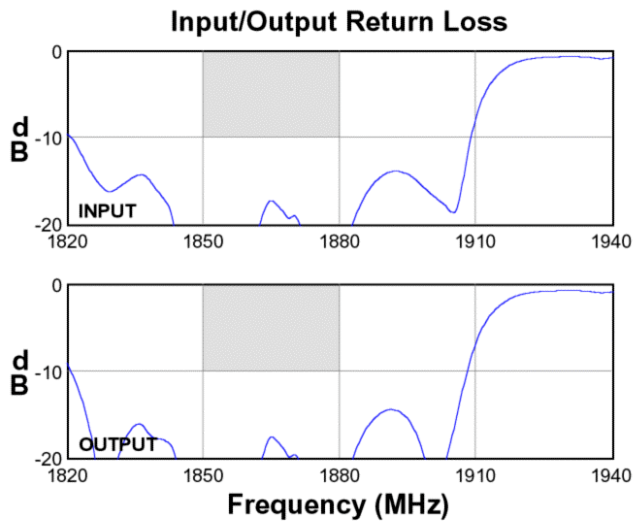
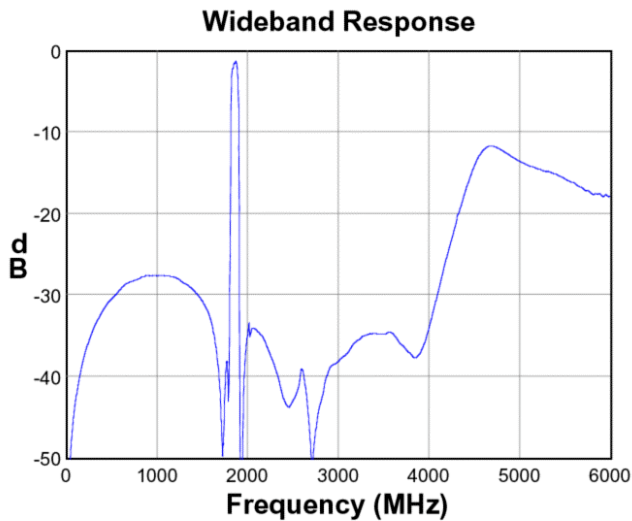
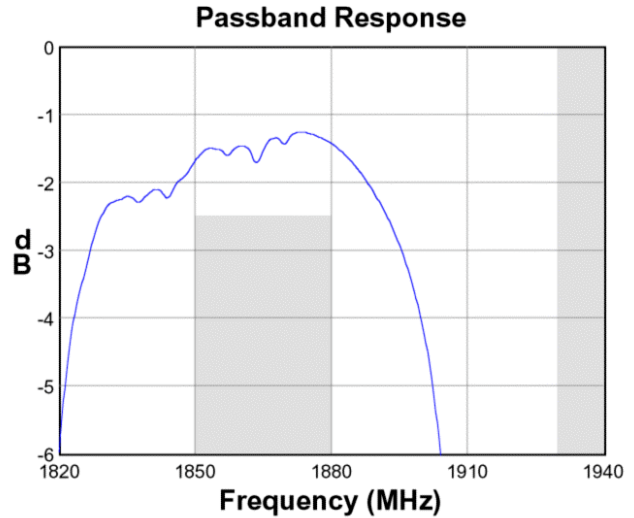
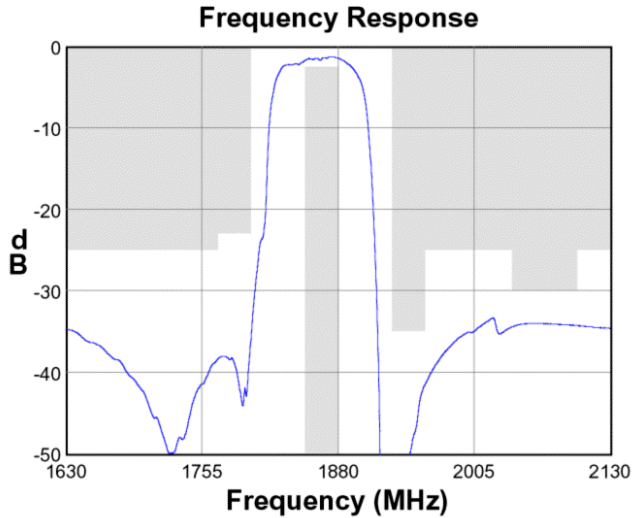
Notes:

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

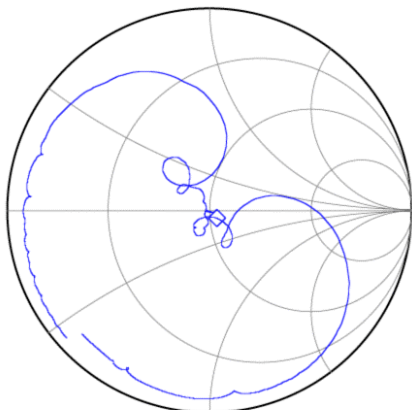
Band #1 Test Circuit:


Data Sheet

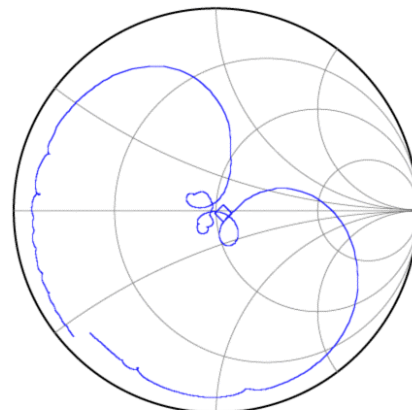
Band #1 Typical Performance (at +25°C)



Input Smith Chart



Output Smith Chart

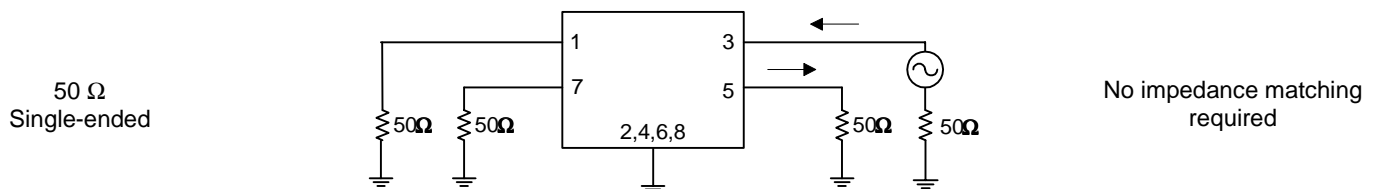


Data Sheet
Band #2 Electrical Specifications ⁽¹⁾
Operating Temperature Range: ⁽²⁾ -40 to +85 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1895	-	MHz
Maximum Insertion Loss 1880 - 1910 MHz	-	1.9	2.5	dB
Passband Ripple 1880 - 1910 MHz	-	0.4	1.5	dB p-p
Absolute Attenuation				
DC - 1800 MHz	25	28	-	dB
1800 - 1830 MHz	24	35	-	dB
1960 - 1990 MHz	35	40	-	dB
1990 - 2040 MHz	25	34	-	dB
2040 - 2100 MHz	30	33	-	dB
2100 - 3000 MHz	25	39	-	dB
Input/Output Return Loss 1880 - 1910 MHz	10	20	-	dB
Terminating Source Impedance: ⁽⁴⁾	-	50	-	Ω
Terminating Load Impedance: ⁽⁴⁾	-	50	-	Ω
Operating Temperature Range	-40	+25	+85	°C

Notes:

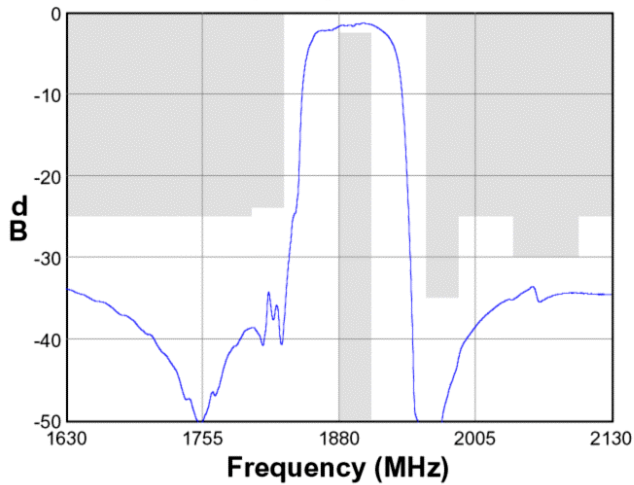
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

Band #2 Test Circuit:


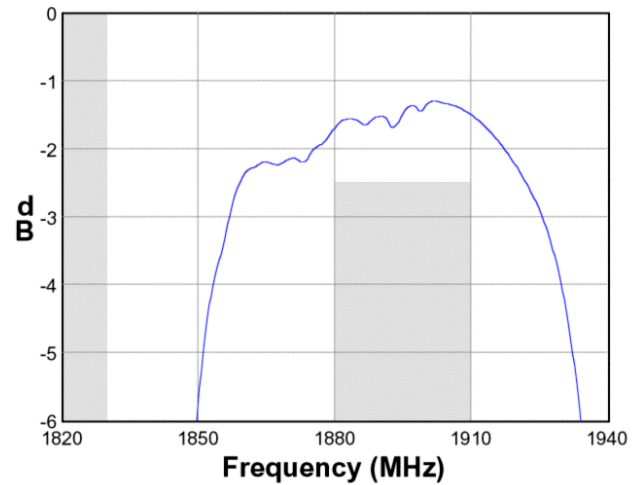
Data Sheet

Band #2 Typical Performance (at +25°C)

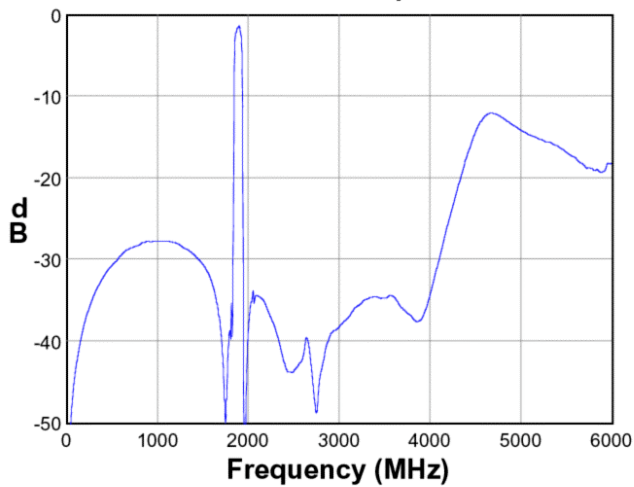
Frequency Response



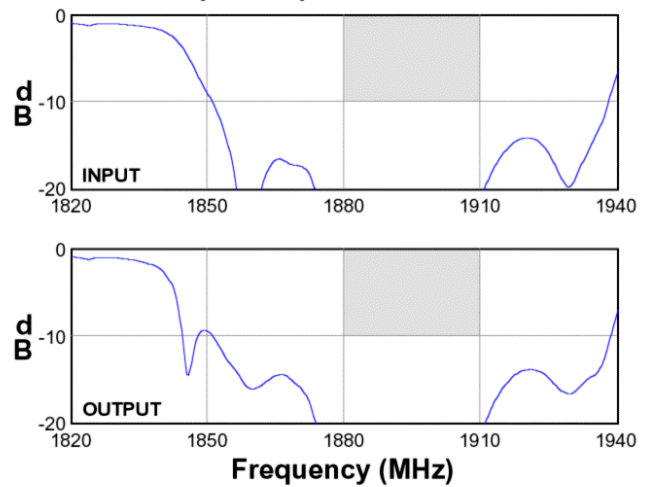
Passband Response



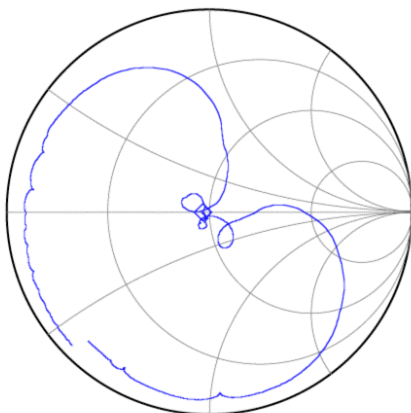
Wideband Response



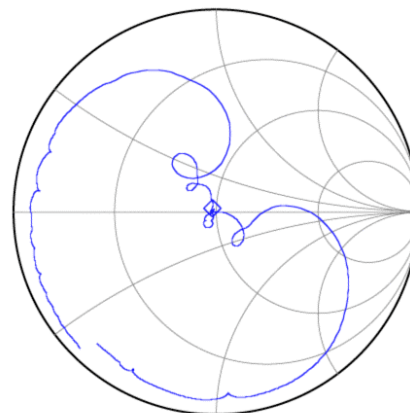
Input/Output Return Loss



Input Smith Chart

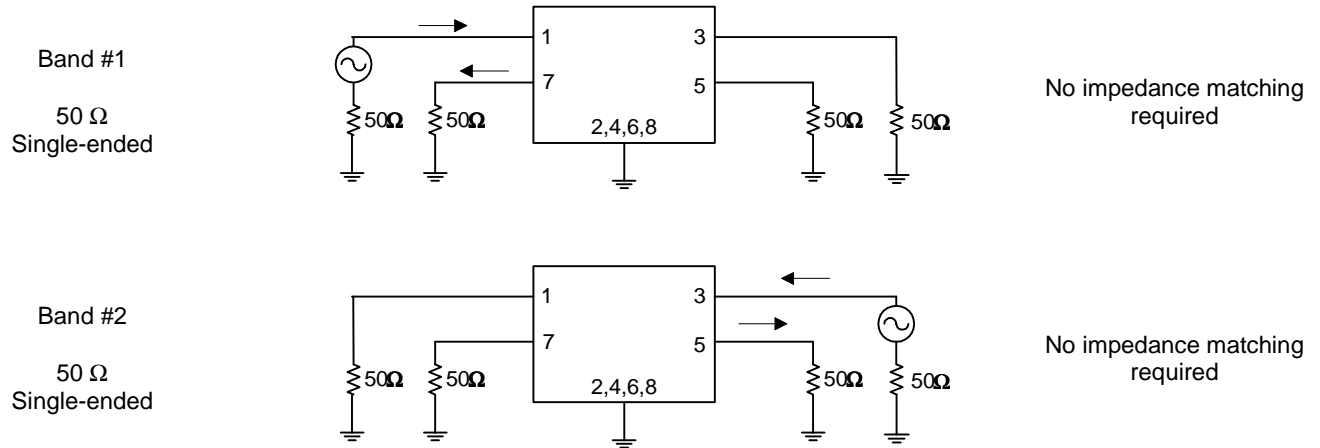


Output Smith Chart



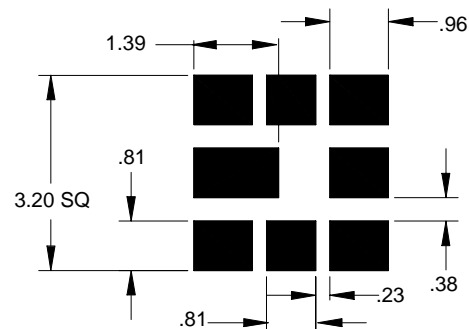
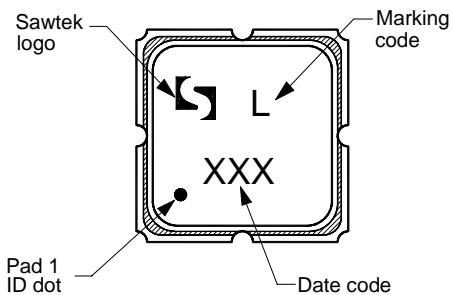
Data Sheet

Matching Schematics



Marking

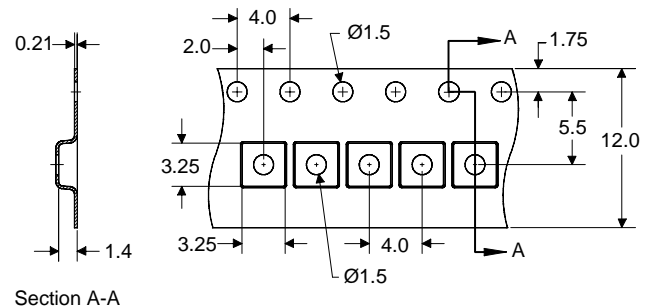
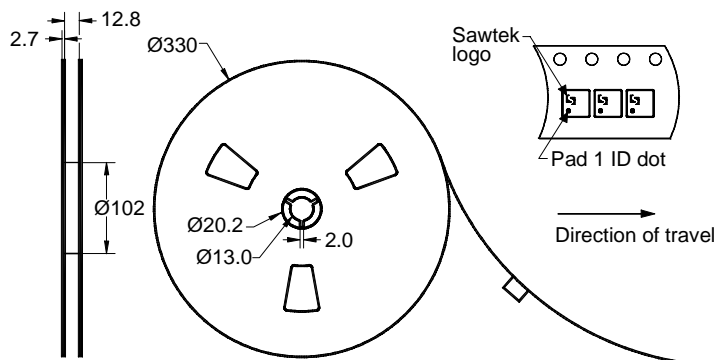
PCB Footprint



Date code is the day of the current year in 3-digit Julian format

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}	-	+12	dBm

Warnings

- Electrostatic Sensitive Device (ESD) 
- Avoid ultrasonic exposure

Links to Additional Technical Information[PCB Layout Tips](#)[Qualification Flowchart](#)[Soldering Profile](#)[S-Parameters](#)[Reel and Packaging Label](#)[Other Technical Information](#)**Contact Information**

PO Box 609501
Orlando, FL 32860-9501
USA

Phone: +1 (407) 886-8860
Fax: +1 (407) 886-7061
Email: custservice@sawtek.com
Web: www.sawtek.com

Or contact one of our worldwide
Network of [sales offices](#),
[Representatives or distributors](#)