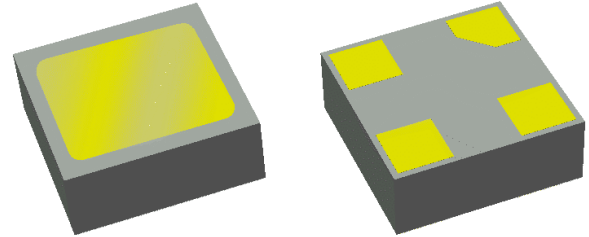


Preliminary Data Sheet

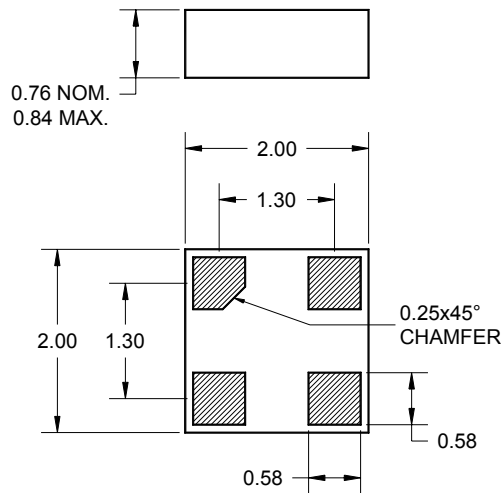
Features

- For PCS applications
- Usable bandwidth 60 MHz
- Low loss
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 2.00 x 2.00 x 0.76 mm

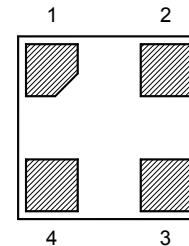


Dimensions shown are nominal in millimeters
All tolerances are ± 0.10 mm

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
3	Output
2,4	Case ground

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -20 to +70 °C

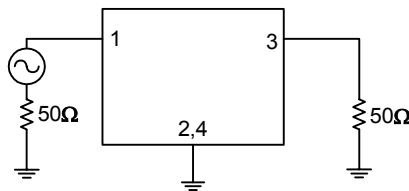
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1880	-	MHz
Maximum Insertion Loss 1850 - 1910 MHz	-	2.5	4	dB
In Band Ripple 1850 - 1910 MHz	-	1.2	2.7	dB p-p
Absolute Attenuation				
DC - 1660 MHz	20	22	-	dB
1660 - 1721 MHz	20	23	-	dB
1721 - 1800 MHz	24	27	-	dB
1930 - 1990 MHz	17	27	-	dB
1930 - 1990 MHz (+10 to +55 °C)	24	27	-	dB
1990 - 2000 MHz	20	25	-	dB
2000 - 2250 MHz	22	24	-	dB
2250 - 2480 MHz	20	23	-	dB
3700 - 3820 MHz	30	33	-	dB
Input/Output Return Loss 1850 - 1910 MHz	8.0	9.5	-	dB
Source Impedance ⁽⁴⁾	-	50	-	Ω
Load Impedance ⁽⁴⁾	-	50	-	Ω

Notes:

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

Test Circuit:

50 Ω
Single-ended



No impedance matching required

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

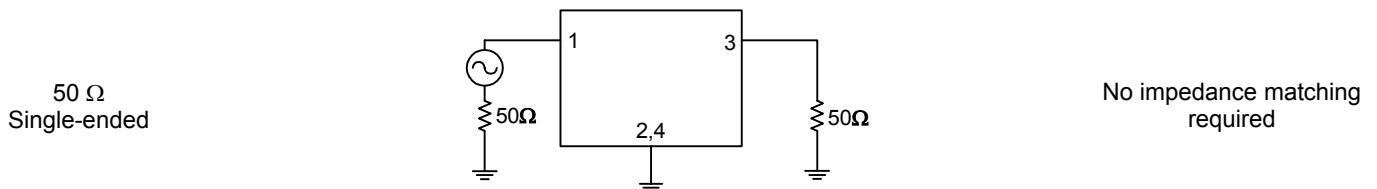
Operating Temperature Range: ⁽²⁾ -30 to +80 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1880	-	MHz
Maximum Insertion Loss				
1850 - 1908 MHz	-	2.3	4	dB
1908 - 1910 MHz	-	2.5	4.5	dB
In Band Ripple				
1850 - 1910 MHz	-	1.2	2.7	dB p-p
Absolute Attenuation				
DC - 1660 MHz	20	22	-	dB
1660 - 1721 MHz	20	23	-	dB
1721 - 1800 MHz	24	27	-	dB
1930 - 1990 MHz	12	27	-	dB
1930 - 1990 MHz (+10 to +55 °C)	24	27	-	dB
1990 - 2000 MHz	20	25	-	dB
2000 - 2250 MHz	22	24	-	dB
2250 - 2480 MHz	20	23	-	dB
3700 - 3820 MHz	30	33	-	dB
Input/Output Return Loss				
1850 - 1910 MHz	8.0	9.5	-	dB
Source Impedance: ⁽⁴⁾	-	50	-	Ω
Load Impedance: ⁽⁴⁾	-	50	-	Ω

Notes:

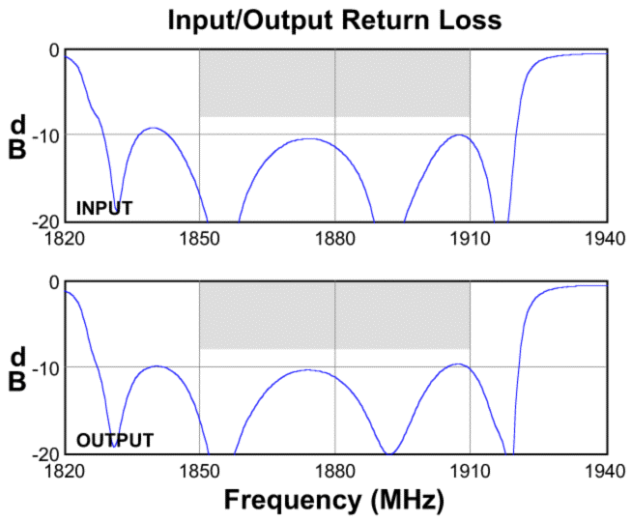
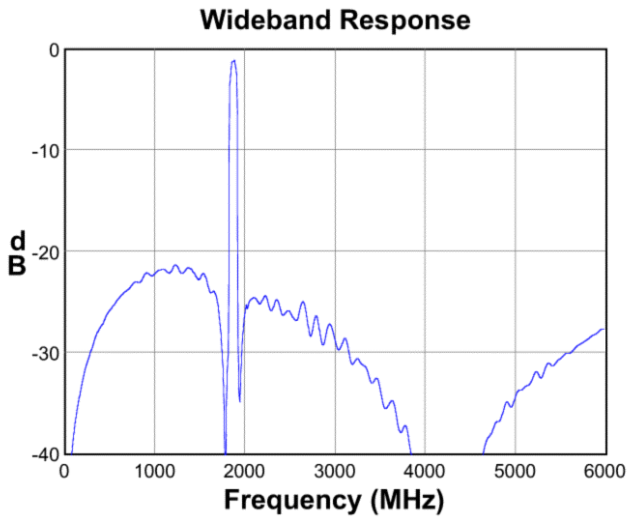
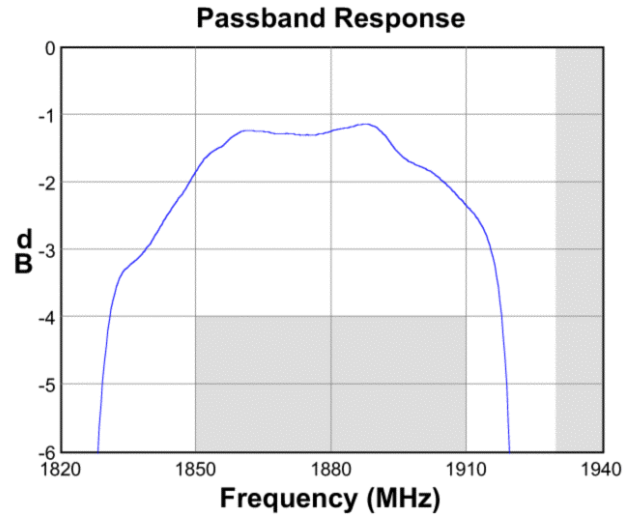
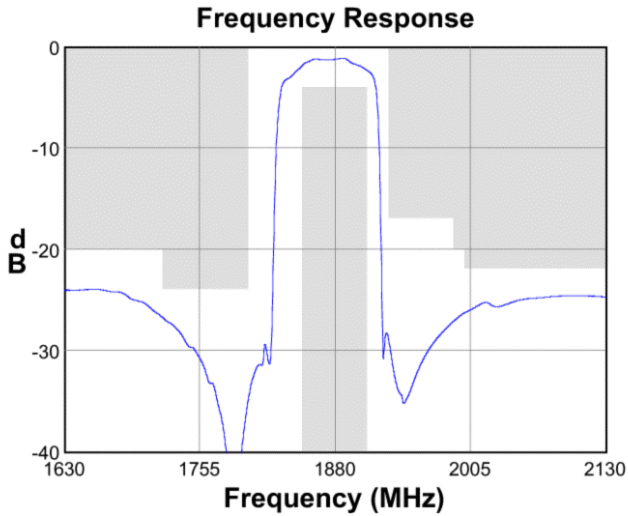
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

Test Circuit:

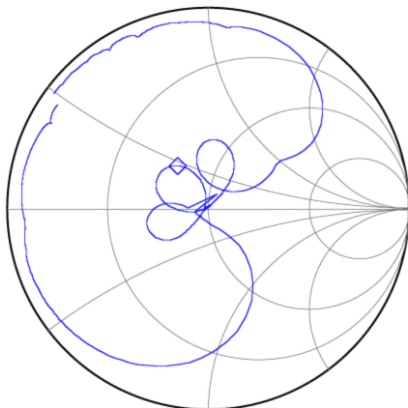


Preliminary Data Sheet

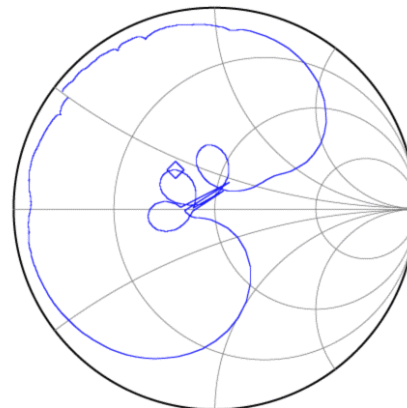
Typical Performance (at +25°C)



Input Smith Chart



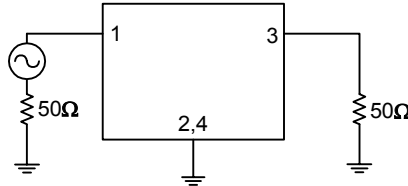
Output Smith Chart



Preliminary Data Sheet

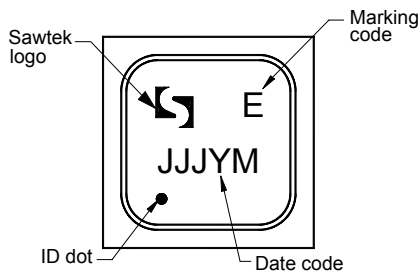
Matching Schematics

50 Ω
Single-ended



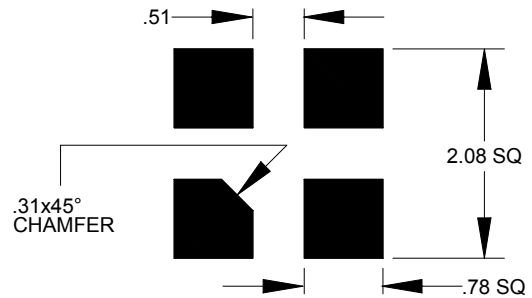
No impedance matching required

Marking



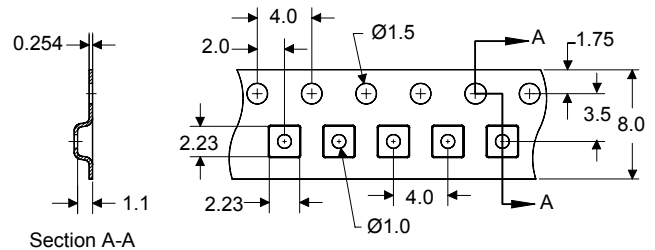
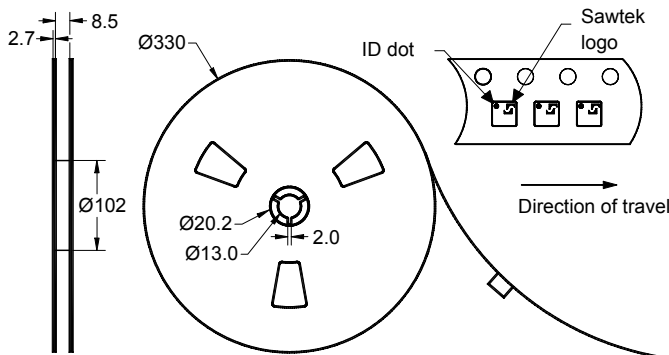
The date code consists of: JJJ = Julian day,
Y = last digit of year, M = manufacturing site code

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

Preliminary Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-30	+80	°C
Storage Temperature Range	T _{stg}	-40	+85	°C

Warnings

- Electrostatic Sensitive Device (ESD) 
- Avoid ultrasonic exposure

Links to Additional Technical Information

[PCB Layout Tips](#)

[Qualification Flowchart](#)

[Soldering Profile](#)

[S-Parameters](#)

[Other Technical Information](#)

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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](#)