
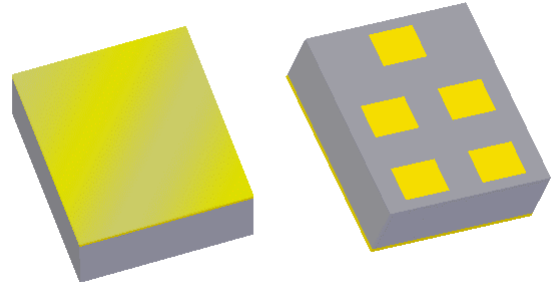


Preliminary Data Sheet

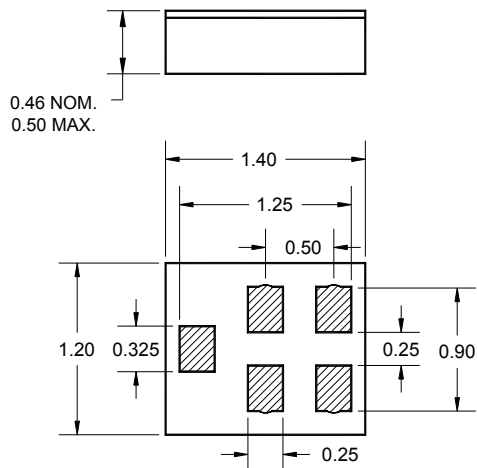
Features

- For CDMA/PCS applications
- Usable bandwidth of 60 MHz
- High Rx attenuation
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- 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

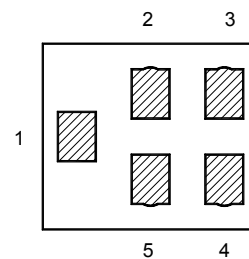


Dimensions shown are nominal in millimeters
All tolerances are ± 0.10 mm

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
3	Ground
2,5	Case ground

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

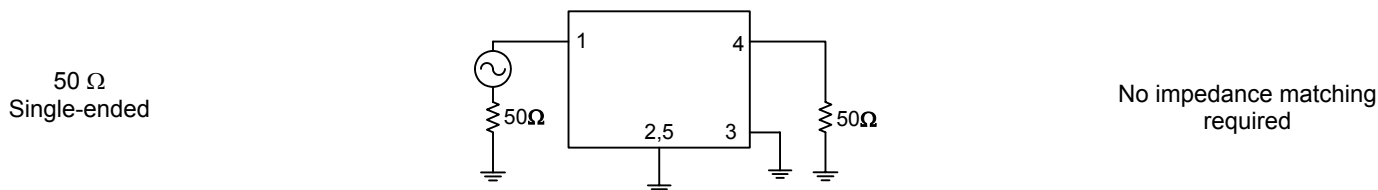
Operating Temperature Range: ⁽²⁾ +25 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1880	-	MHz
Maximum Insertion Loss 1850 - 1909.4 MHz	-	2.6	3.0	dB
Passband Variation 1850 - 1909.4 MHz	-	0.9	1.5	dB p-p
Absolute Attenuation				
DC - 1770 MHz	24	28	-	dB
1770 - 1825 MHz	20	26	-	dB
1930.625 - 1990 MHz	35	38	-	dB
1990 - 2500 MHz	30	33	-	dB
2500 - 3000 MHz	28	32	-	dB
3000 - 3820 MHz	21	26	-	dB
3820 - 6000 MHz	10	16	-	dB
Input/Output VSWR 1850 - 1909.4 MHz	-	2	2.5	-
Optimal Source Impedance ⁽⁴⁾	-	50	-	Ω
Optimal 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

Electrical Specifications ⁽¹⁾

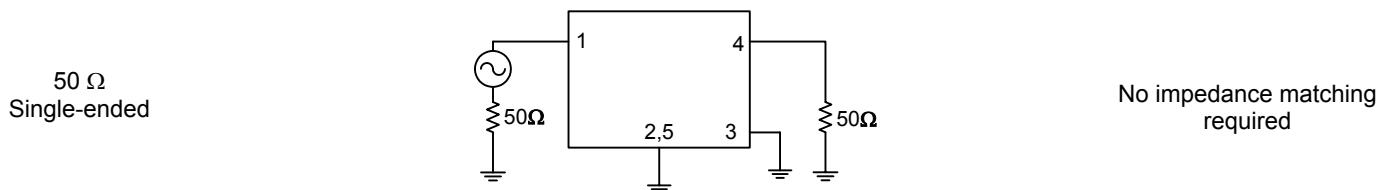
Operating Temperature Range: ⁽²⁾ -30 to +85 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	1880	-	MHz
Maximum Insertion Loss 1850 - 1909.4 MHz	-	2.6	3.9	dB
Passband Variation 1850 - 1909.4 MHz	-	0.9	2.0	dB p-p
Absolute Attenuation				
DC - 1770 MHz	22	28	-	dB
1770 - 1825 MHz	14	26	-	dB
1930.625 - 1990 MHz	35	38	-	dB
1990 - 2500 MHz	30	33	-	dB
2500 - 3000 MHz	28	32	-	dB
3000 - 3820 MHz	21	26	-	dB
3820 - 6000 MHz	10	16	-	dB
Input/Output VSWR 1850 - 1909.4 MHz	-	2	2.5	-
Optimal Source Impedance ⁽⁴⁾	-	50	-	Ω
Optimal Load Impedance ⁽⁴⁾	-	50	-	Ω

Notes:

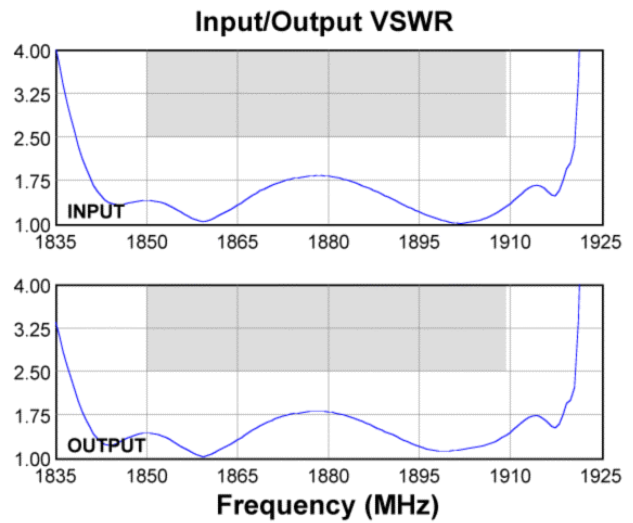
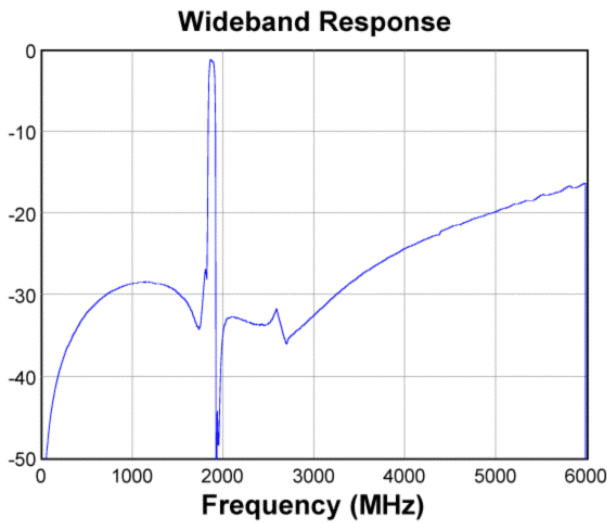
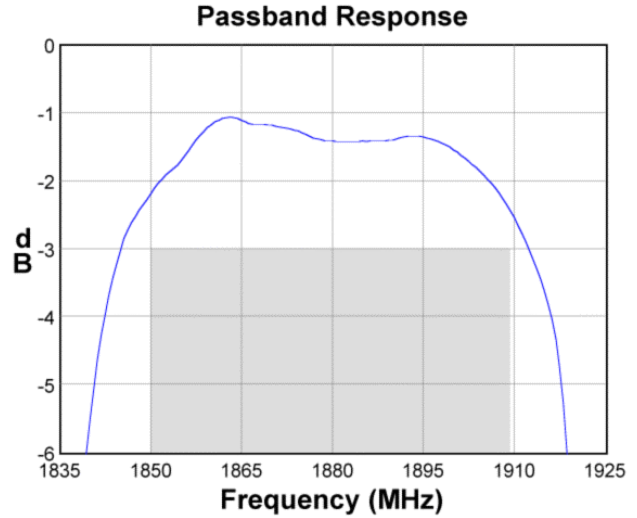
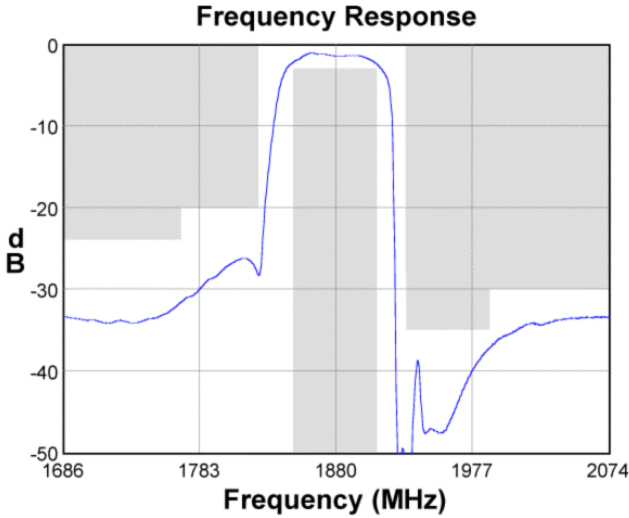
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Test Circuit:

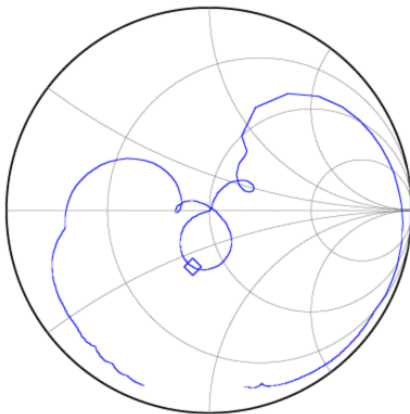


Preliminary Data Sheet

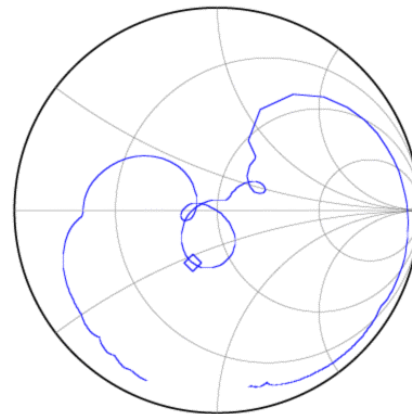
Typical Performance (at +25°C)



Input Smith Chart



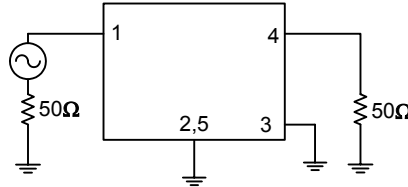
Output Smith Chart



Preliminary Data Sheet

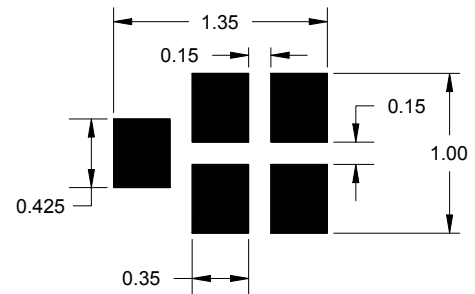
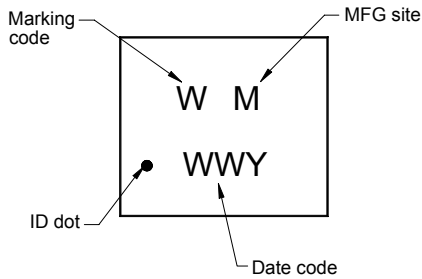
Matching Schematics

50 Ω
Single-ended



No impedance matching
required

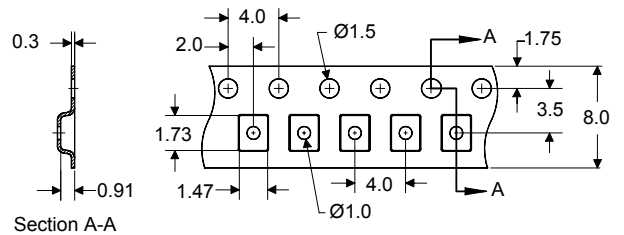
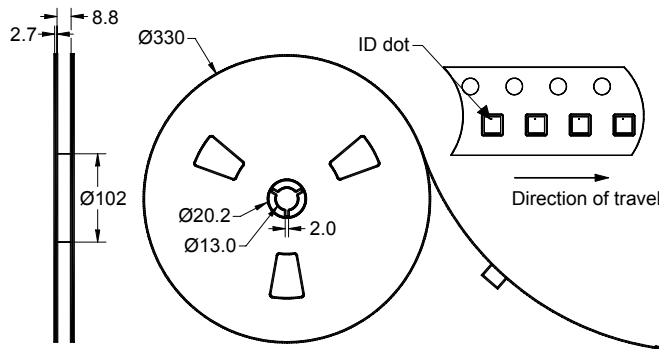
Marking PCB Footprint



The date code consists of: WW = 2 digit week,
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: 10000 units/reel


Preliminary Data Sheet

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 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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Network of [sales offices](#),
[Representatives or distributors](#)