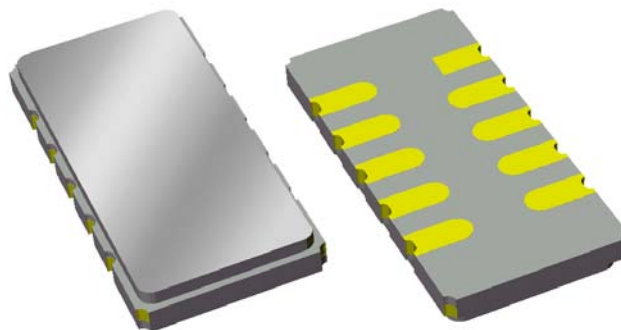


Data Sheet

Features

- For WCDMA basestation IF applications
- Usable bandwidth of 3.6 MHz
- Low loss
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size

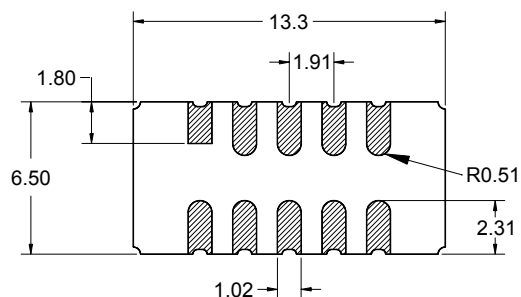
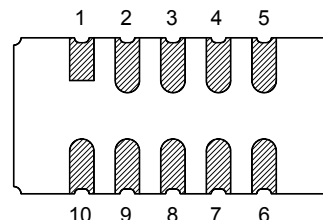
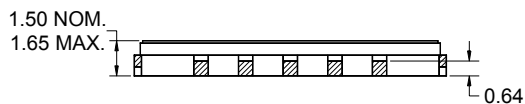


Package

Surface Mount 13.30 x 6.50 x 1.50 mm

Pin Configuration

Bottom View



Pin No.	Description
5	RF output
10	RF input
1,6	Ground
2,3,4	Case ground
7,8,9	Case ground

Dimensions shown are nominal in millimeters
All tolerances are $\pm 0.15\text{mm}$ except overall
length and width $\pm 0.10\text{mm}$

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

Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -10 to +85 °C

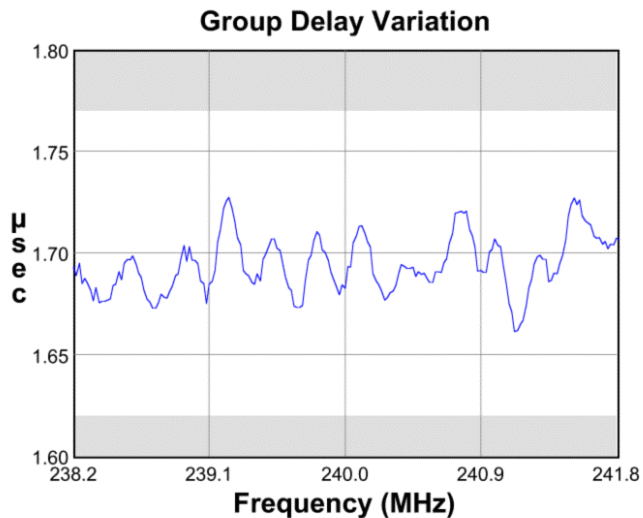
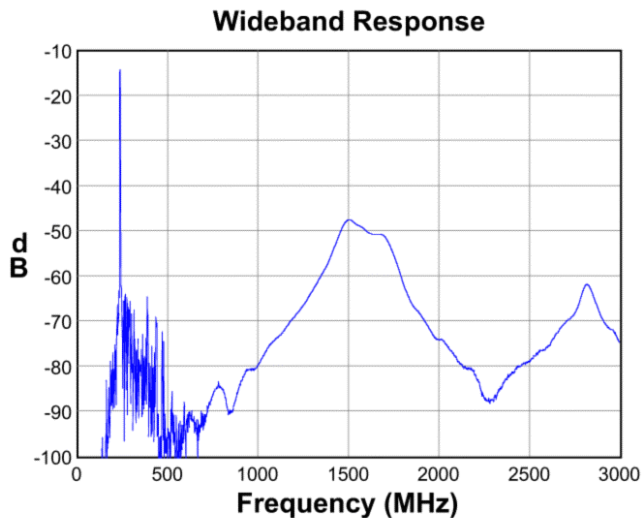
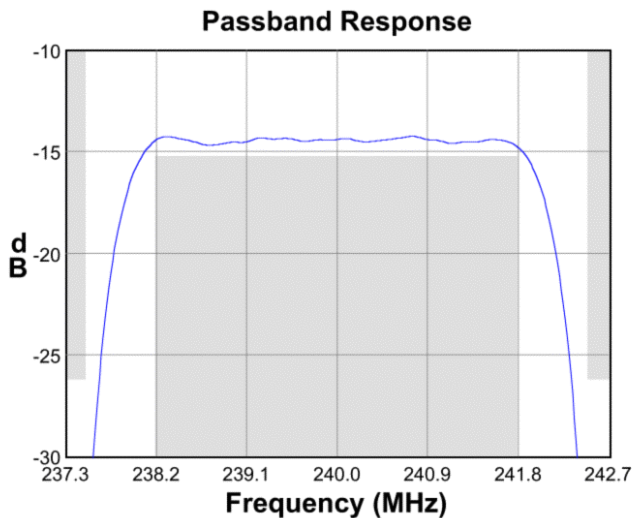
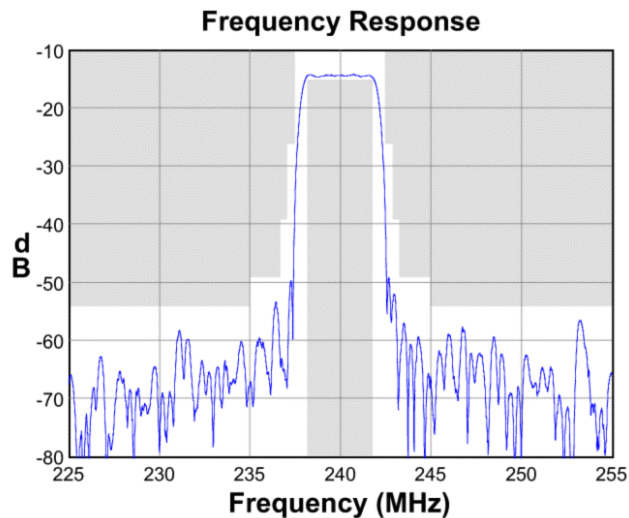
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency, f_0	-	240	-	MHz
Insertion Loss at Minimum	12.5	14.3	16.5	dB
Maximum Insertion Loss 238.2 - 241.8 MHz	12.5	14.8	16.5	dB
Lower 1 dB Point ⁽⁴⁾	-	238.10	238.2	MHz
Upper 1 dB Point ⁽⁴⁾	241.8	241.94	-	MHz
Amplitude Variation 238.2 - 241.8 MHz	-	0.5	1	dB p-p
Group Delay 238.2 - 241.8 MHz	1.59	1.69	1.79	μsec
Group Delay Ripple 238.2 - 241.8 MHz	-	0.060	0.15	μsec
Phase Ripple 238.2 - 241.8 MHz	-	2	6	deg p-p
Minimum Rejection 170 - 235 MHz	40	45	-	dB
245 - 310 MHz	40	42	-	dB
Attenuation 236.70 MHz	35	49	-	dB
237.07 MHz	25	58	-	dB
237.50 MHz	12	28	-	dB
242.50 MHz	12	22	-	dB
242.93 MHz	25	42	-	dB
243.30 MHz	35	49	-	dB
Input/Output VSWR 238.2 - 241.8 MHz	-	1.5:1	2.0:1	Ratio
Source Impedance: ⁽⁵⁾	-	50	-	Ω
Load Impedance: ⁽⁵⁾	-	50	-	Ω

Notes:

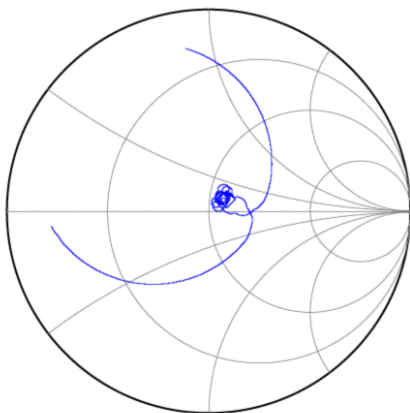
1. All specifications are based on the test circuit shown on page 4
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

Data Sheet

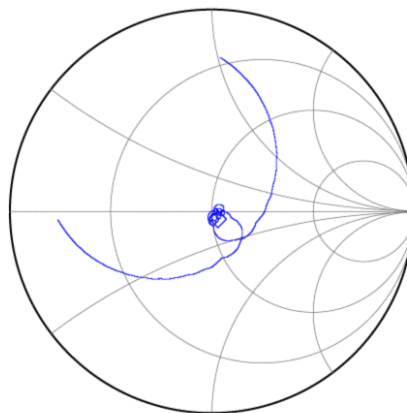
Typical Performance (at +25°C)



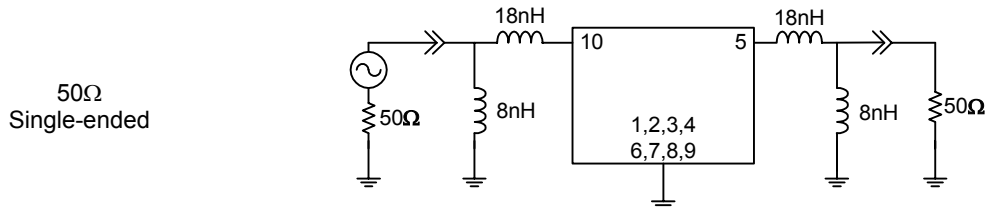
Input Smith Chart



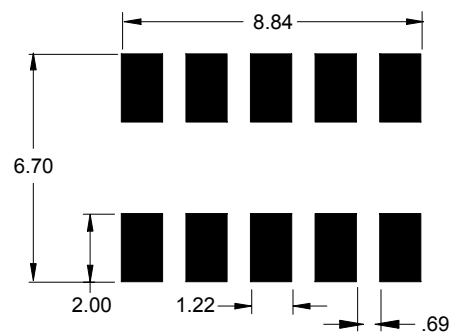
Output Smith Chart



Actual matching values may vary due to PCB layout and parasitics

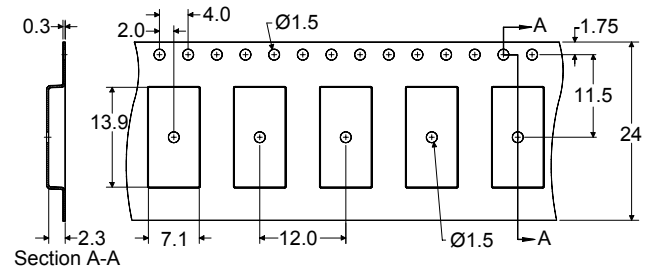
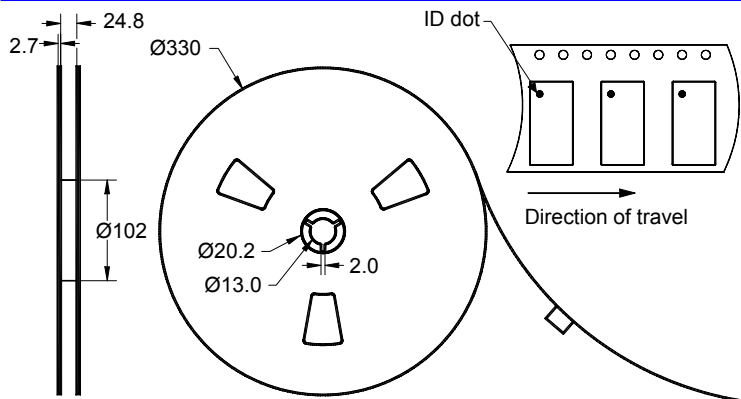


PCB Footprint



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

Tape and Reel



Dimensions shown are nominal in millimeters
Packaging quantity: 2000 units/reel

Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-10	+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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[representatives or distributors](#)