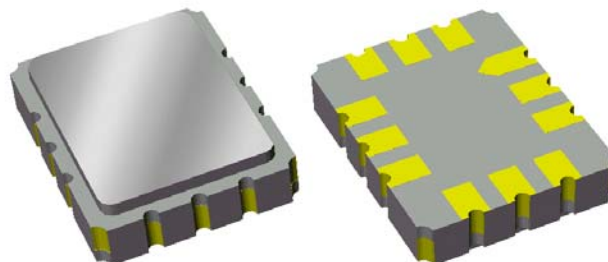


Data Sheet

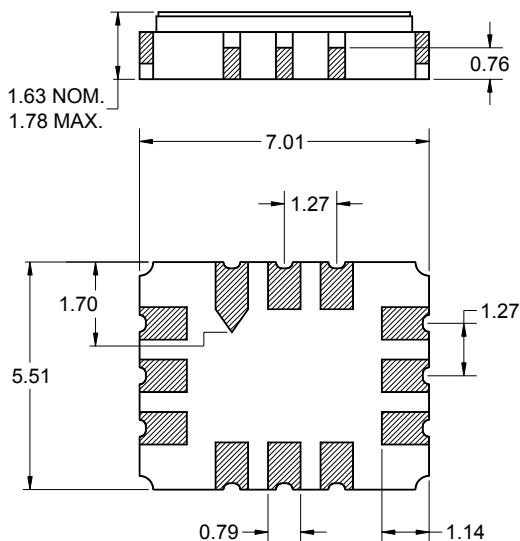
Features

- Usable bandwidth of 9 MHz
- High attenuation
- Single-ended operation at 50Ω
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 7.01 x 5.51 x 1.63 mm

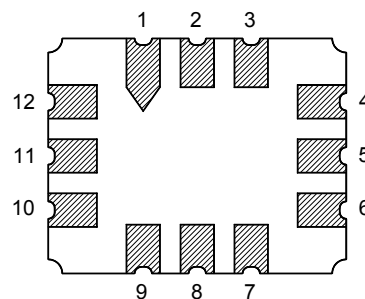


Dimensions shown are nominal in millimeters
 All tolerances are ± 0.15 mm except overall
 length and width ± 0.13 mm

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

Pin Configuration

Bottom View



Pin No.	Description
3	Output
9	Input
1,2,4,5,6,7	Case Ground
8,10,11,12	Case Ground

Data Sheet

Electrical Specifications ^(1,2,3)

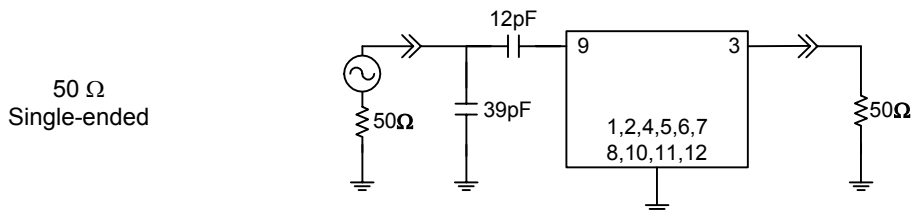
Parameter ⁽⁴⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	479.75	-	MHz
Insertion Loss	-	19.5	22	dB
3 dB Bandwidth ⁽⁵⁾	9	11.7	-	MHz
35 dB Bandwidth ⁽⁵⁾	-	19.9	22	MHz
Passband Variation ⁽⁶⁾	-	0.38	1	dB p-p
Group Delay Variation 475.25 - 484.25 MHz	-	26	50	nsec
Source Impedance ⁽⁷⁾	-	50	-	Ω
Load Impedance ⁽⁷⁾	-	50	-	Ω
Temperature Coefficient ⁽³⁾	-	-23	-	ppm/ $^{\circ}$ C
Substrate Material	-	LiTaO ₃	-	-

Notes:

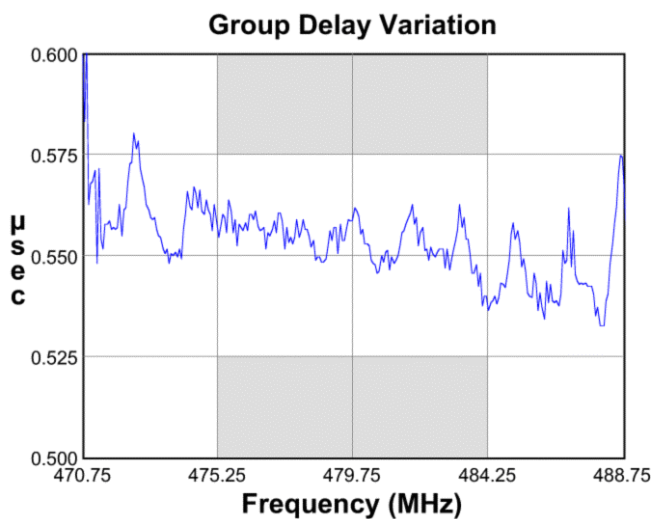
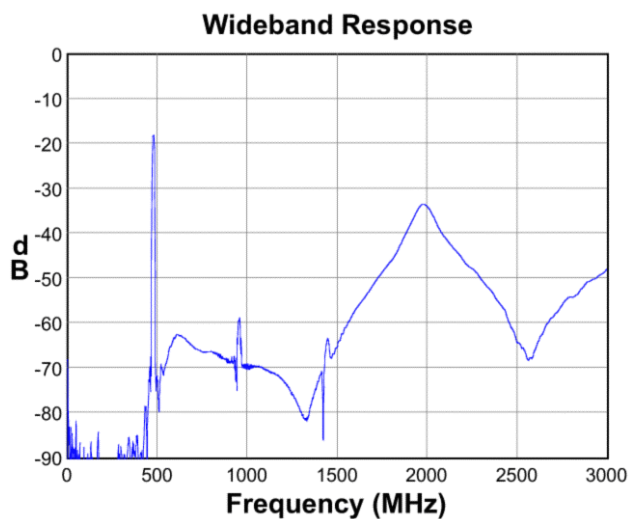
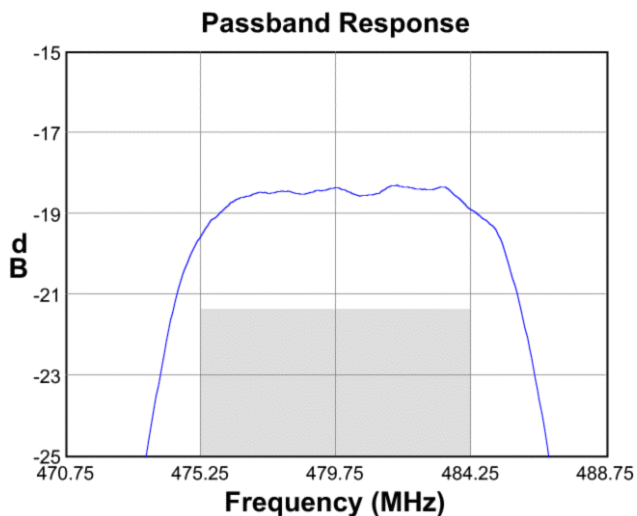
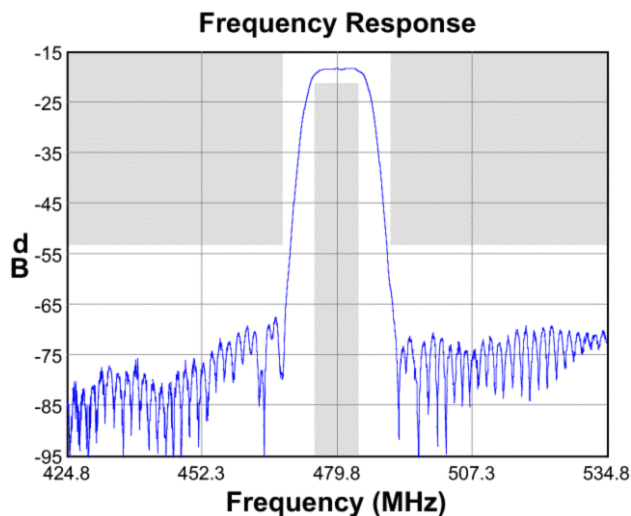
1. All specifications are based on the test circuit shown below
2. This specification is valid for room temperature only
3. Device will function over an operating temperature of -40 to 85 $^{\circ}$ C, but may not meet the above ambient specification. Insertion loss and frequency shift performance will change over temperature. See coefficient of temperature for frequency shift estimation.
4. Electrical margin has been built into the design to account for the variations due to manufacturing tolerances
5. Referenced to insertion loss at 479.75 MHz
6. Referenced to 100% of 1dB bandwidth
7. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

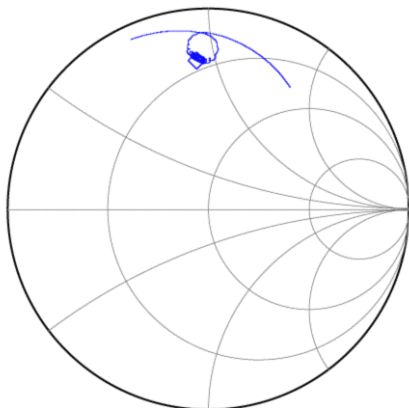
Actual matching values may vary due to PCB layout and parasitics



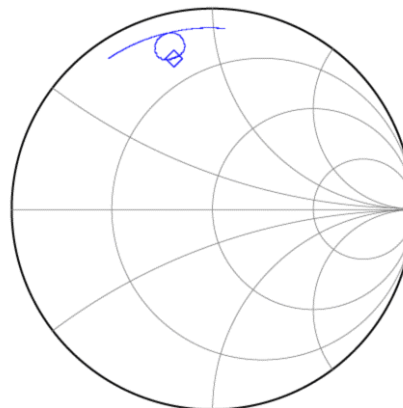
Typical Performance (at +25°C)



Input Smith Chart



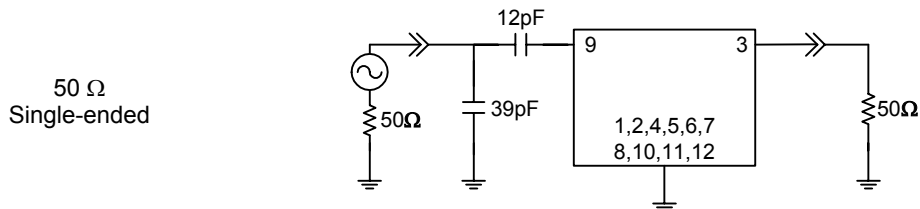
Output Smith Chart



Data Sheet

Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

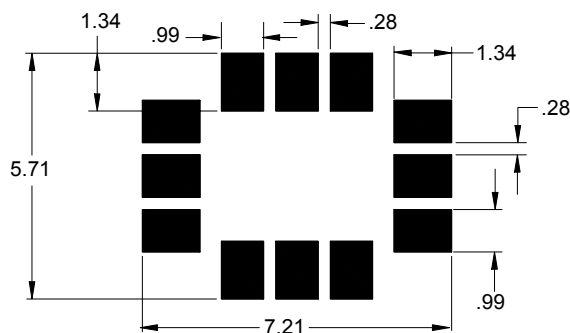


Marking



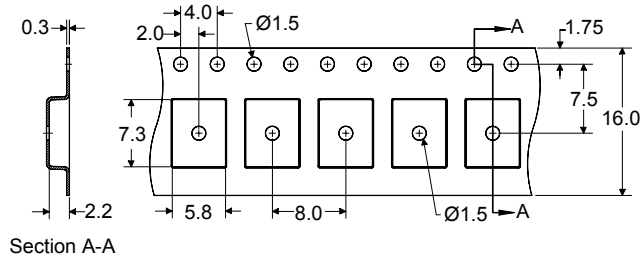
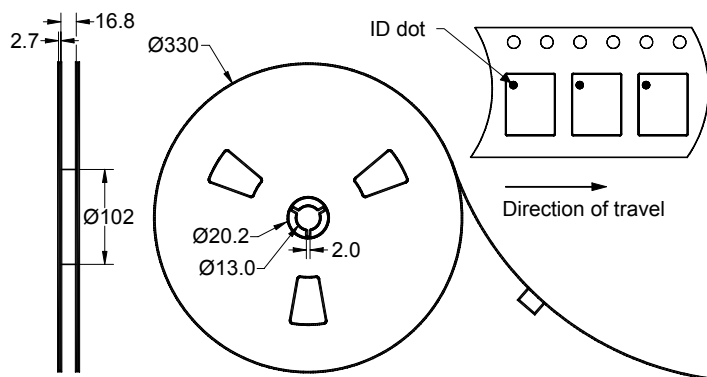
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

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: 3000 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

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](#)