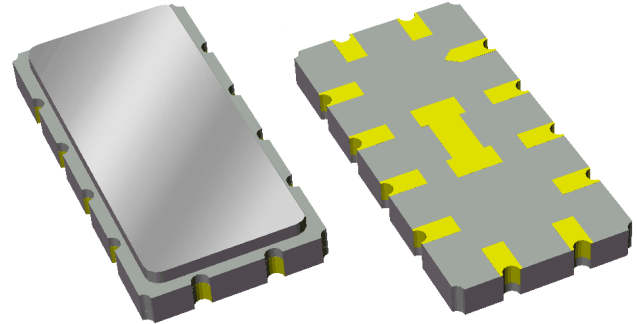


Data Sheet

Features

- For GSM/EDGE applications
- Usable bandwidth 400 KHz
- Single-ended and differential operation
- Ceramic Surface Mount Package (SMP)
- Small size

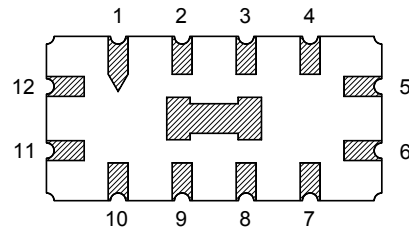
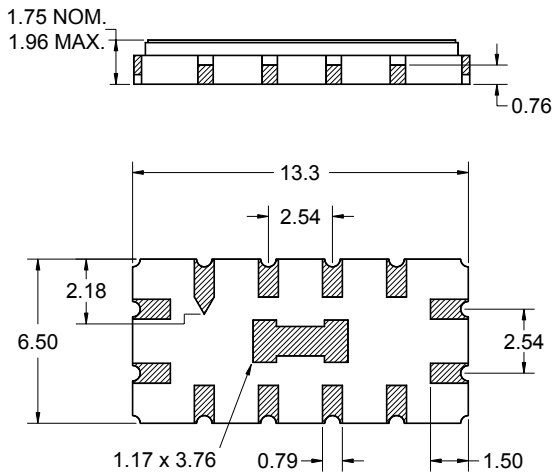


Package

Surface Mount 13.3 x 6.50 x 1.75 mm

Pin Configuration

Bottom View



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

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

Body: Al_2O_3 ceramic
Lid: Kovar, Ni plated

Terminations: Au plating 0.5 - 1.0 μ m,
over a 2 - 6 μ m Ni plating

Data Sheet
Electrical Specifications ⁽¹⁾
Operating Temperature Range: ⁽²⁾ -10 to +85 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	208	-	MHz
Insertion Loss at Fo	4	5.0	7	dB
1 dB Lower Frequency	-	207.724	207.8	MHz
1 dB Upper Frequency	208.2	208.340	-	MHz
8 dB Lower Frequency	207.4	207.498	-	MHz
8 dB Upper Frequency	-	208.571	208.6	MHz
20 dB Lower Frequency	206.8	207.294	-	MHz
20 dB Upper Frequency	-	208.774	209.2	MHz
Amplitude Variation 207.8 - 208.2 MHz	-	0.38	1	dB p-p
Group Delay Variation 207.8 - 208.2 MHz	-	172	300	nsec
Absolute Delay 207.8 - 208.2 MHz	0.7	1.113	1.7	μsec
Absolute Attenuation 10 - 195 MHz	55	63	-	dB
195.0 - 198.5 MHz	43	62	-	dB
198.5 - 202.0 MHz	40	51	-	dB
202.0 - 204.6 MHz	34	45	-	dB
204.6 - 206.2 MHz	25	39	-	dB
206.2 - 206.8 MHz	20	31	-	dB
209.2 - 209.8 MHz	20	33	-	dB
209.8 - 211.4 MHz	25	37	-	dB
211.4 - 214.0 MHz	34	45	-	dB
214.0 - 217.5 MHz	40	53	-	dB
217.5 - 221.0 MHz	43	55	-	dB
221.0 - 450.0 MHz	55	60	-	dB
Input/Output VSWR 207.8 - 208.2 MHz	-	1.46/1.54	2.3	-
Source Impedance ⁽⁴⁾	-	50	-	Ω
Load Impedance ⁽⁴⁾	-	50	-	Ω

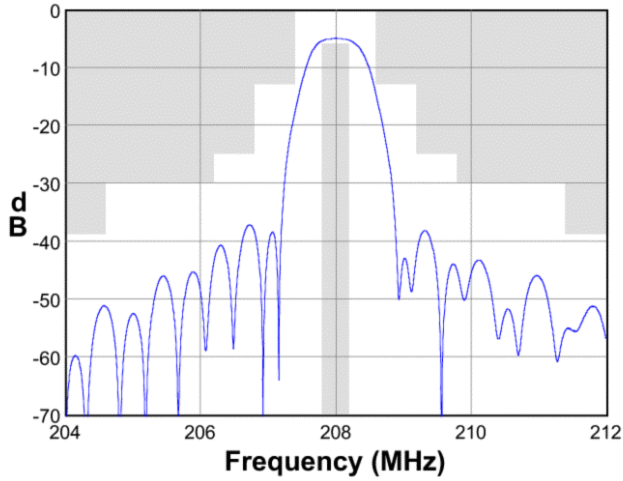
Notes:

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. This is the optimum impedance in order to achieve the performance shown

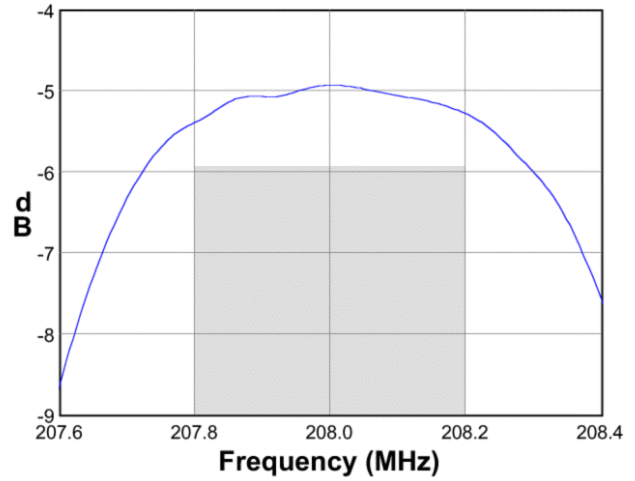
Data Sheet

Typical Performance (at +25°C)

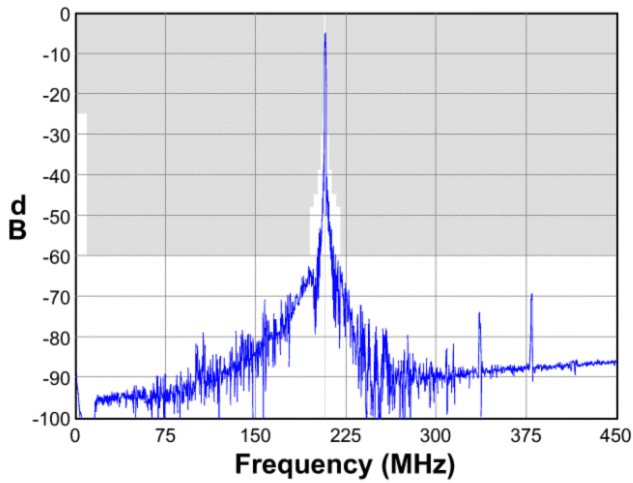
Frequency Response



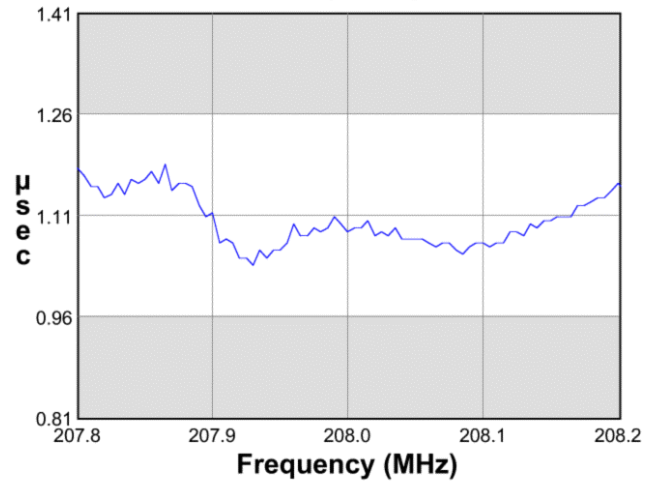
Passband Response



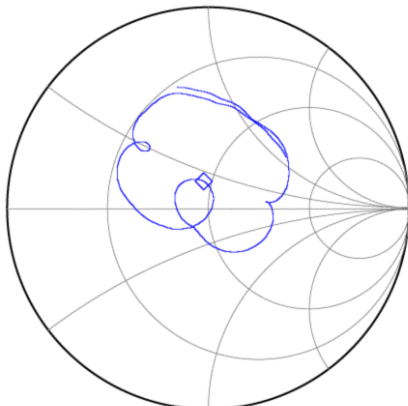
Wideband Response



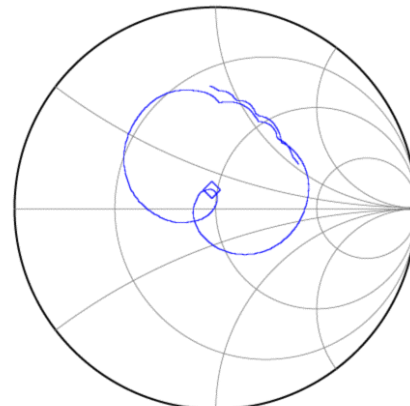
Group Delay



Input Smith Chart



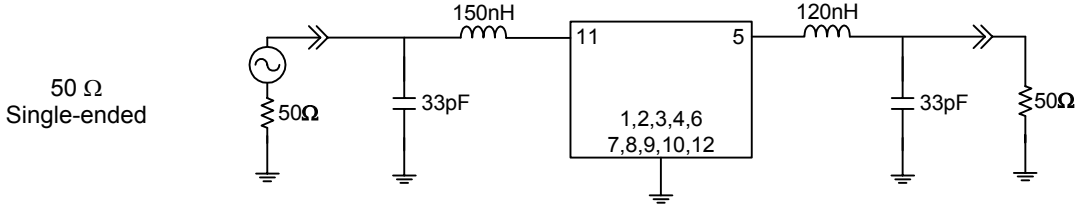
Output Smith Chart



Data Sheet

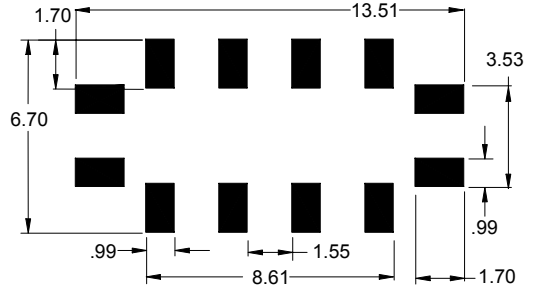
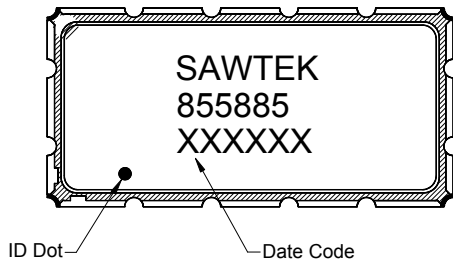
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics



Marking

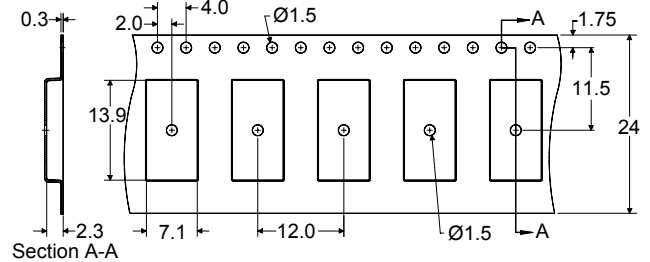
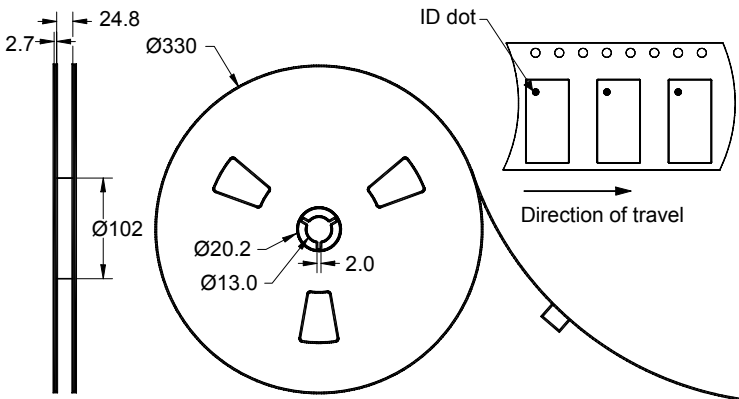
PCB Footprint



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

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	Typical	Maximum	Unit
Operating Temperature Range	T	-10	+25	+85	°C
Storage Temperature Range	T _{stg}	-40	-	+125	°C
Input Power	P _{in}	-	-	10	dBm

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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