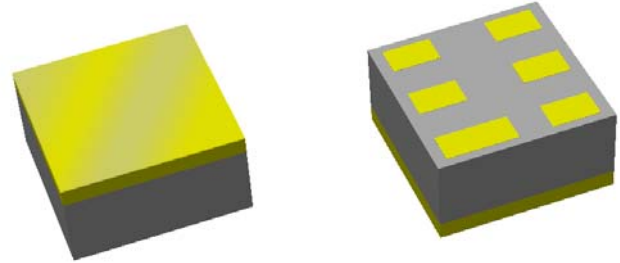


Data Sheet

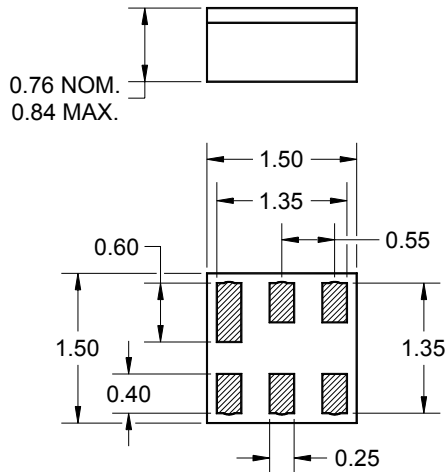
Features

- For GSM-850 applications
- Usable bandwidth of 25 MHz
- Compatible with leading chipset suppliers
- Ultra low loss
- Single-ended input, 50Ω
- Balanced output, 200Ω
- Chip Scale Package (CSP)
- Hermetic



Package

Surface Mount 1.50 x 1.50 x 0.76 mm

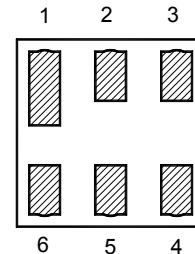


Dimensions shown are nominal in millimeters
 All tolerances are $\pm 0.10\text{mm}$

Body: Al_2O_3 ceramic
 Lid: Kovar or Alloy 42, Au over Ni plated
 Terminations: Au plating 0.5 - 1.0 μm ,
 over a 2 - 6 μm Ni plating

Pin Configuration

Bottom View



Pin No.	Description
2	Input
4,6	Output
1,3,5	Case ground

Data Sheet

Electrical Specifications ⁽¹⁾

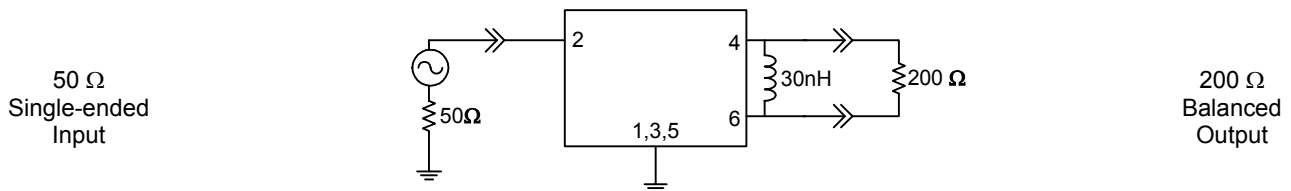
Operating Temperature Range: ⁽²⁾ +25 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	881.5	-	MHz
Maximum Insertion Loss 869 - 894 MHz	-	1.2	1.5	dB
Amplitude Variation 869 - 894 MHz	-	0.4	1.2	dB p-p
Absolute Attenuation				
10 - 824 MHz	30	42	-	dB
824 - 842 MHz	30	35	-	dB
842 - 849 MHz	22	24	-	dB
914 - 970 MHz	18	19.5	-	dB
970 - 2607 MHz	22	30	-	dB
2607 - 2682 MHz	41	52	-	dB
2682 - 4345 MHz	38	40	-	dB
4345 - 4470 MHz	37	55	-	dB
4470 - 6000 MHz	38	42	-	dB
Output Amplitude Balance (S₃₁/S₂₁) 869 - 894 MHz	-1	0.7	1	dB
Output Phase Balance [Φ(S₃₁)-ΦS₂₁+180] 869 - 894 MHz	-10	7	10	degree
Input/Output VSWR 869 - 894 MHz	-	1.7	2.5	
Source Impedance ⁽⁴⁾	-	50	-	Ω
Load Impedance (Balanced) ⁽⁴⁾	-	200 30nH	-	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:



Data Sheet

Electrical Specifications ⁽¹⁾

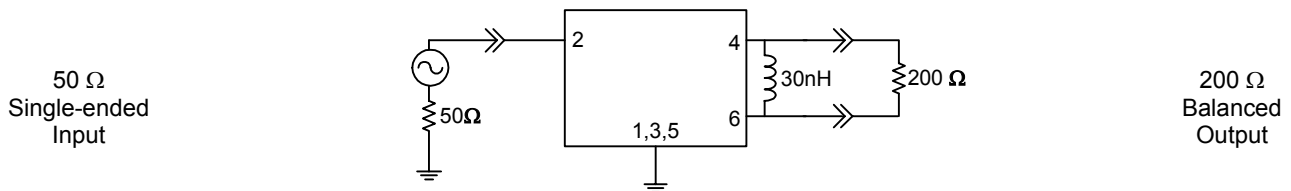
Operating Temperature Range: ⁽²⁾ -25 to +80 °C

Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	881.5	-	MHz
Maximum Insertion Loss 869 - 894 MHz	-	1.2	1.9	dB
Amplitude Variation 869 - 894 MHz	-	0.4	1.2	dB p-p
Absolute Attenuation				
10 - 824 MHz	30	42	-	dB
824 - 842 MHz	30	35	-	dB
842 - 849 MHz	22	24	-	dB
914 - 970 MHz	18	19.5	-	dB
970 - 2607 MHz	22	30	-	dB
2607 - 2682 MHz	41	52	-	dB
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4345 - 4470 MHz	37	55	-	dB
4470 - 6000 MHz	38	42	-	dB
Output Amplitude Balance (S₃₁/S₂₁) 869 - 894 MHz	-1	0.7	1	dB
Output Phase Balance [Φ(S₃₁)-ΦS₂₁+180] 869 - 894 MHz	-10	7	10	degree
Input/Output VSWR 869 - 894 MHz	-	1.7	2.5	
Source Impedance ⁽⁴⁾	-	50	-	Ω
Load Impedance (Balanced) ⁽⁴⁾	-	200 30nH	-	Ω

Notes:

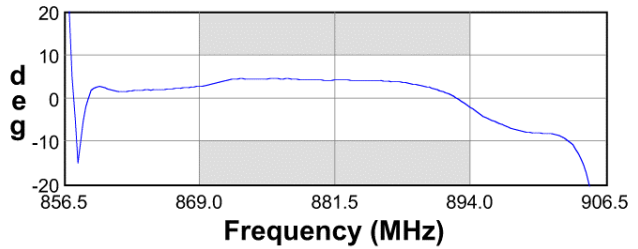
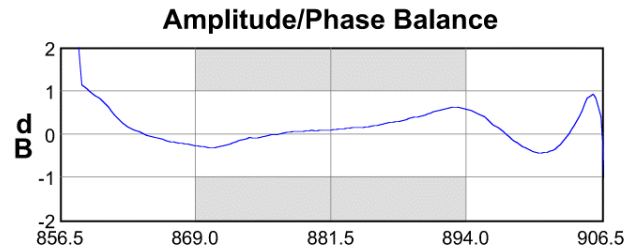
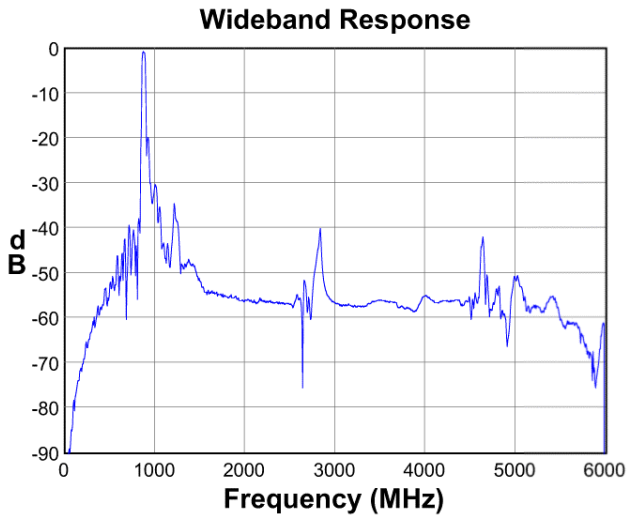
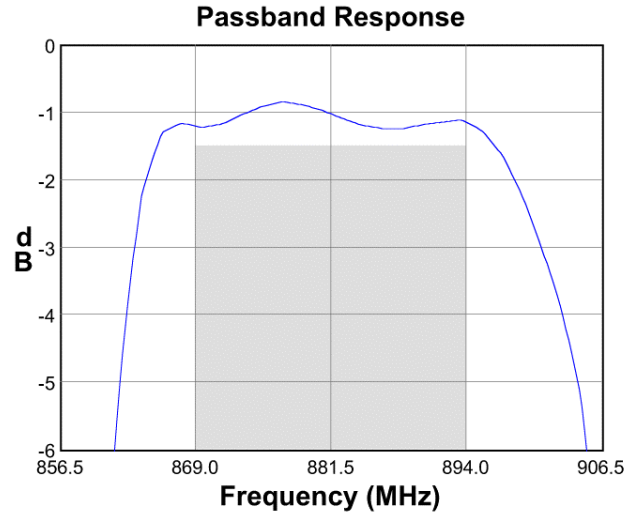
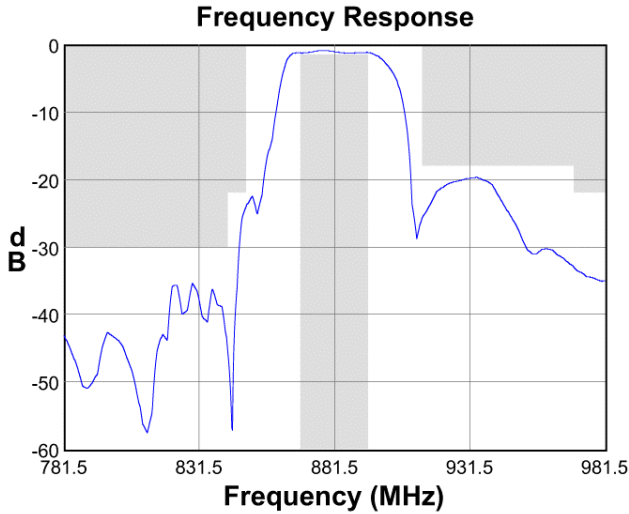
1. All specifications are based on the test circuit shown below
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

Test Circuit:

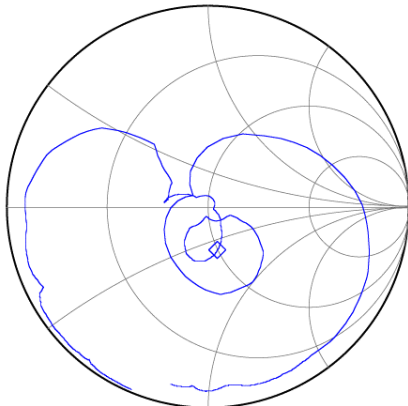


Data Sheet

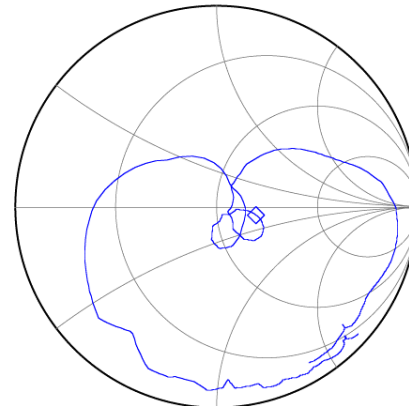
Typical Performance (at +25°C)



Input Smith Chart

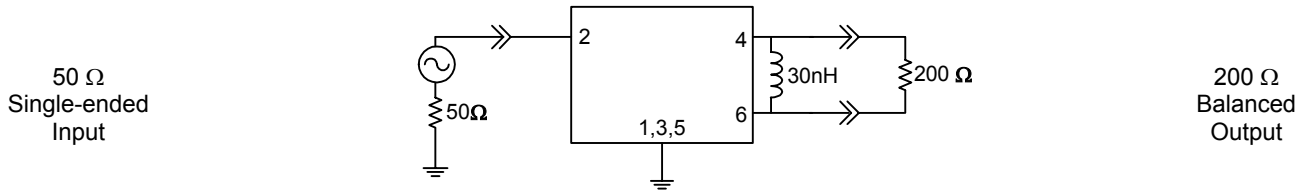


Output Smith Chart

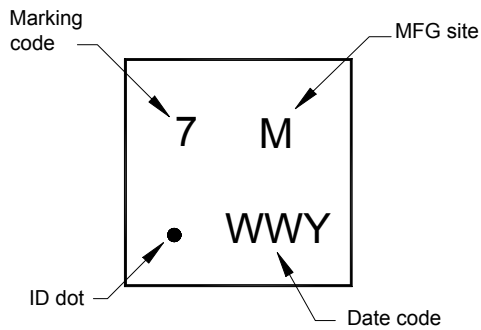


Data Sheet

Matching Schematics

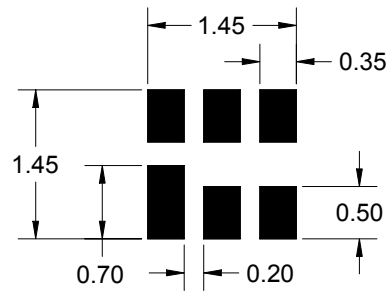


Marking



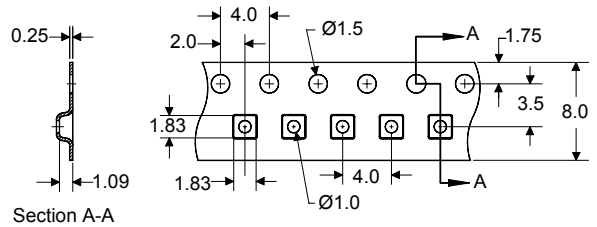
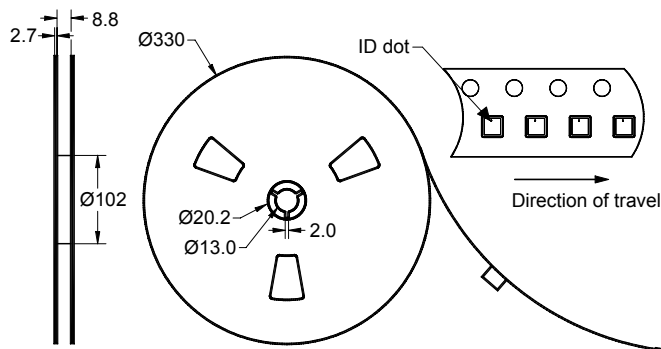
The date code consists of: WW = 2 digit week, Y = last digit of year, M = manufacturing site code

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

Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-25	+80	°C
Storage Temperature Range	T _{stg}	-40	+85	°C

Warnings

- Electrostatic Sensitive Device (ESD) 
- Avoid ultrasonic exposure

Material Content

- Does not contain lead (Pb) or other RoHS restricted materials

Links to Additional Technical Information

[PCB Layout Tips](#)

[Qualification Flowchart](#)

[Soldering Profile](#)

[S-Parameters](#)

[Other Technical Information](#)

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