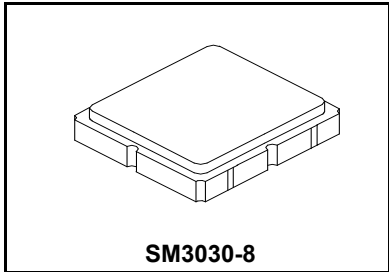


RF3501E

866.1 MHz
SAW Filter



- 863.0 - 870.0 MHz Filter
- Optimized for use with the TRC103 Transceiver
- Balanced 150 ohm IC Interface
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+15	dBm
DC Voltage	±5	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_c			866.1		MHz
1 dB Bandwidth	BW_1			31		MHz
3 dB Bandwidth	BW_3			40		MHz
Maximum Insertion Loss, 863.0 to 870.0 MHz	IL_{MAX}			3.0	4.5	dB
Amplitude Ripple, p-p, 863.0 to 870.0 MHz					1.0	
Rejection Referenced to Insertion Loss at 866.1 MHz:						
518 to 618 MHz			45	48		
618 to 768 MHz			42	45		
768 to 818 MHz			40	43		
918 to 1218 MHz			35	38		
Source Impedance	Z_S			50		Ω
Load Impedance	Z_L			200		Ω

Case Style	SM3030-8 3.0 x 3.0 mm Nominal Footprint	
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	805, <u>YWWS</u>	
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel
	Reel Size 13 Inch	3000 Pieces/Reel

Electrical Connections

Connection	Terminals
Single-ended Port	6
Balanced Port	1, 3
Case Ground	4, 5, 7, 8
No Connection	2

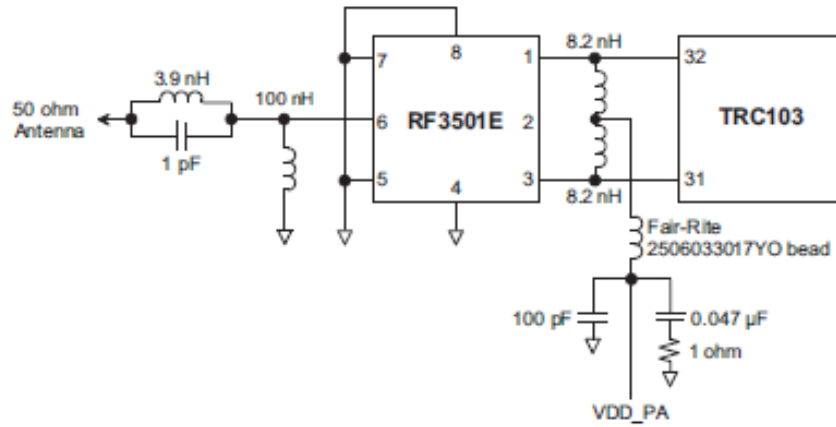


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

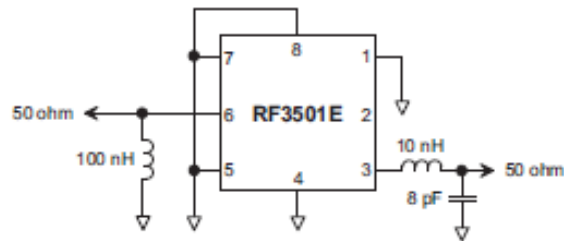
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

RF3501E-TRC103 Application Circuit

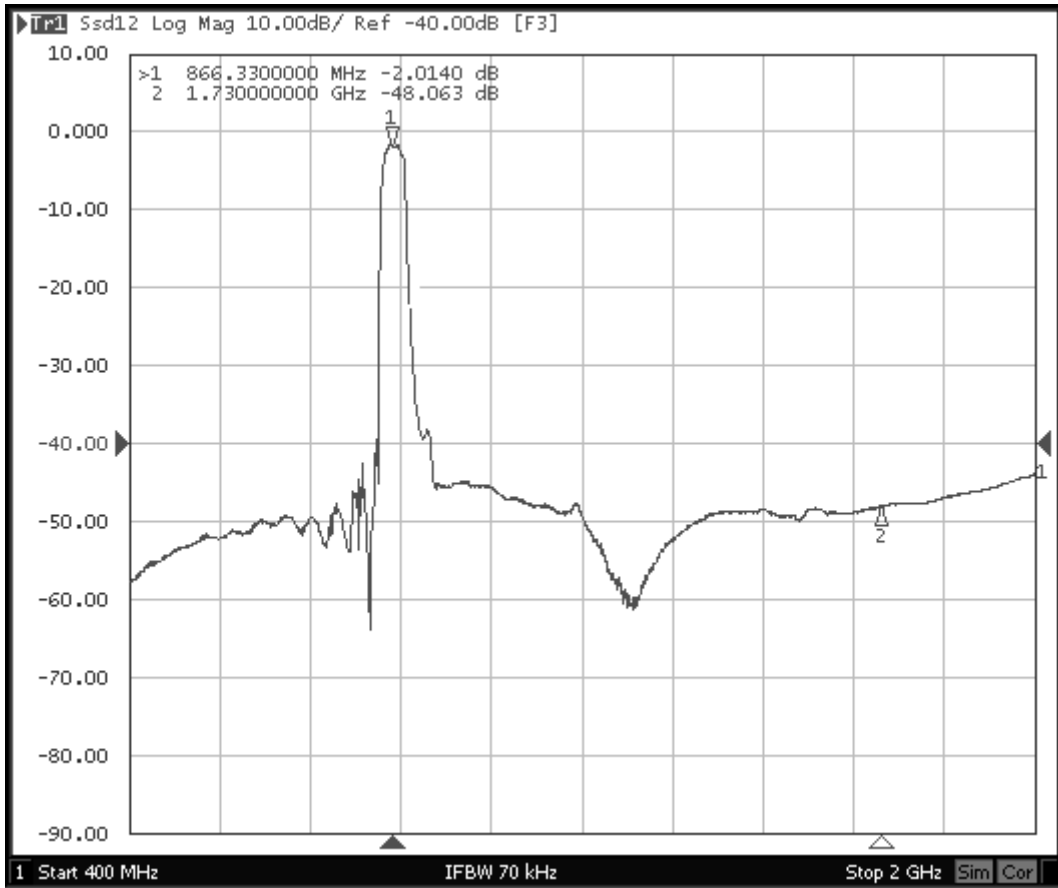


Reference Circuit Diagram Only
 Note: TRC105 has been obsolete

RF3501E 50 Ohm Tuning Network



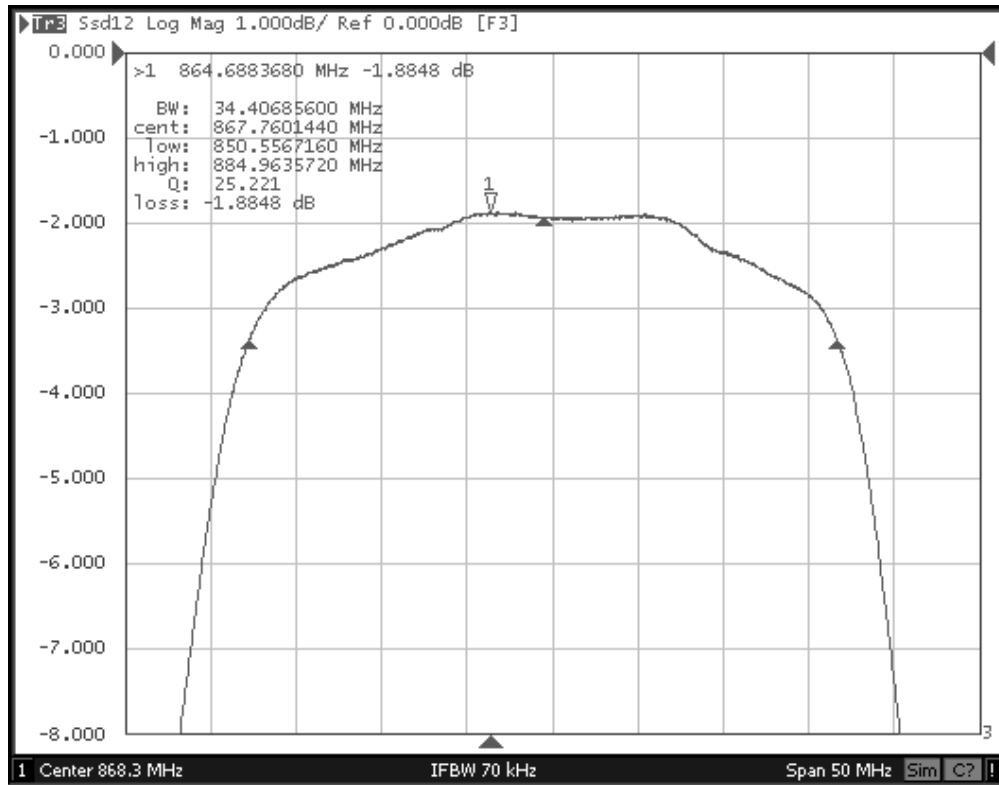
RF3501E Broadband Response, 400 to 2000 MHz



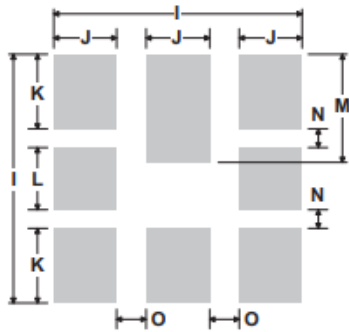
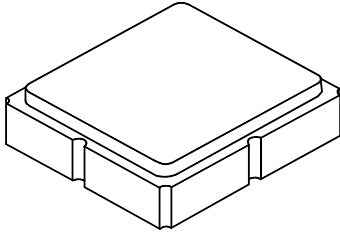
RF3501E Response, 818.3 to 918.3 MHz



RF3501E Passband Response



8-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



PCB Footprint Top View

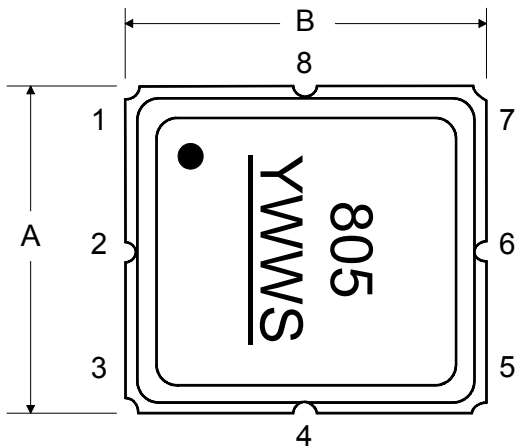
Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.0	3.13	0.113	0.118	0.123
B	2.87	3.0	3.13	0.113	0.118	0.123
C	1.14	1.27	1.40	0.045	0.050	0.055
D	0.79	0.92	1.05	0.031	0.036	0.041
E	0.62	0.75	0.88	0.024	0.029	0.034
F	0.47	0.60	0.73	0.018	0.024	0.029
G	0.47	0.60	0.73	0.018	0.024	0.029
H	1.07	1.20	1.33	0.042	0.047	0.052
I		3.19			0.126	
J		0.81			0.032	
K		0.96			0.038	
L		0.81			0.032	
M		1.39			0.055	
N		0.23			0.009	
O		0.38			0.015	

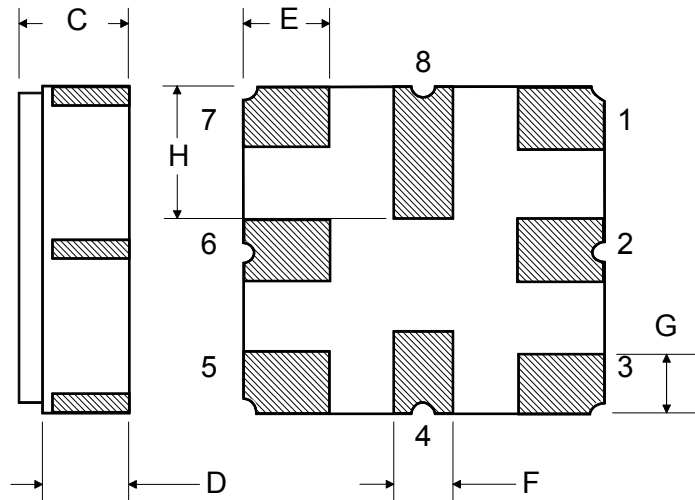
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel
Lid Plating	2.0 to 3.0 μm Nickel
Body	Al_2O_3 Ceramic

TOP VIEW



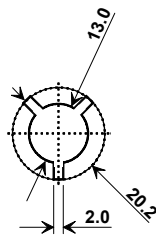
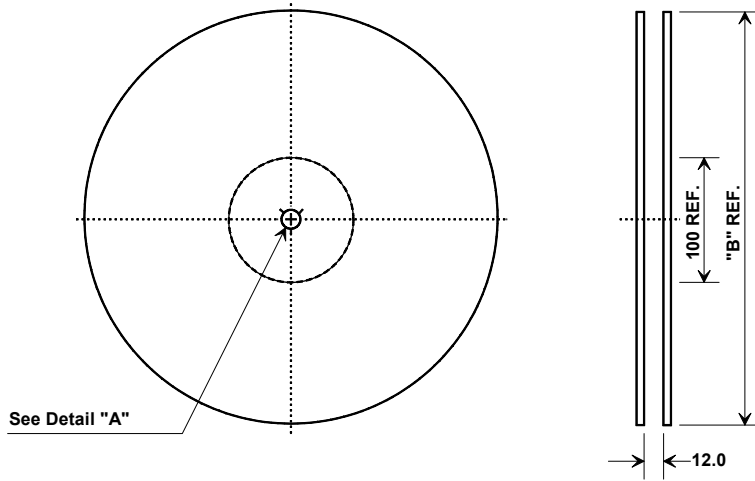
BOTTOM VIEW



Tape and Reel Specifications

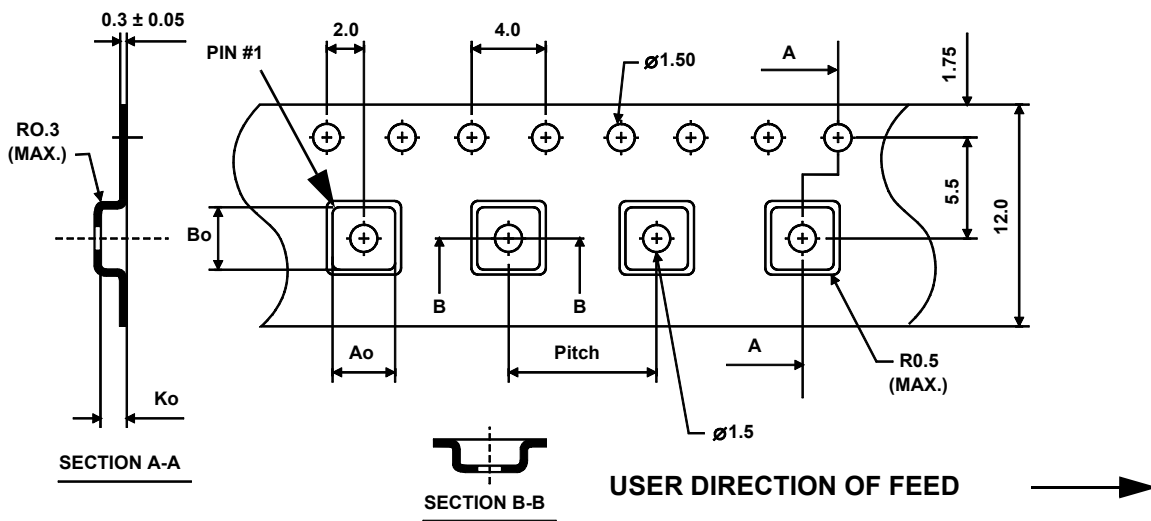
Tape and Reel Standard per ANSI/EIA-481

"B "		Quantity Per Reel
Nominal Size		
Inches	millimeters	
7	178	500
13	330	3000



Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.4 mm
Pitch	8.0 mm
W	12.0 mm

COMPONENT ORIENTATION and DIMENSIONS



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

