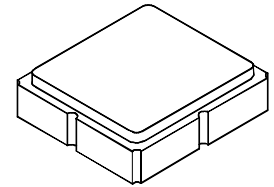


- **Low-Loss Quartz Design**
- **Simple External Impedance Matching**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**



RF3715E

**500 MHz
SAW Filter**



**SM3030-8 Case
3.0 x 3.0**

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +85	°C
Operable Temperatures Range	-40 to +125	°C
Specification Temperature Range	-20 to +70	°C
Soldering Temperature (10 seconds / 5 cycles max.)	260	°C

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency	f_c			500		MHz
Insertion Loss @500 MHz	IL			2.7	3.8	dB
3 dB Bandwidth	BW ₃		0.8	1.0		MHz
Rejection Reference @ 500 MHz		10 - 498.4 MHz	22	26		dB
		498.4 - 499.0 MHz	15	26		
		501.0 - 501.8 MHz	15	20		
		501.8 - 1000 MHz	23	25		
Temperature Freq. Temp. Coefficient	FTC			0.032		ppm/°C ²
Turnover Temperature	To			+15		°C
Frequency Aging Absolute Value during the First Year	fA			<±10		ppm/yr
Lid Symbolization (Y = Year, WW = Week, S = Shift)	C9, YWWS					
Standard Reel Quantity 7 Inch Reel				500 Pieces/Reel		
Standard Reel Quantity 13 Inch Reel				3000 Pieces/Reel		



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

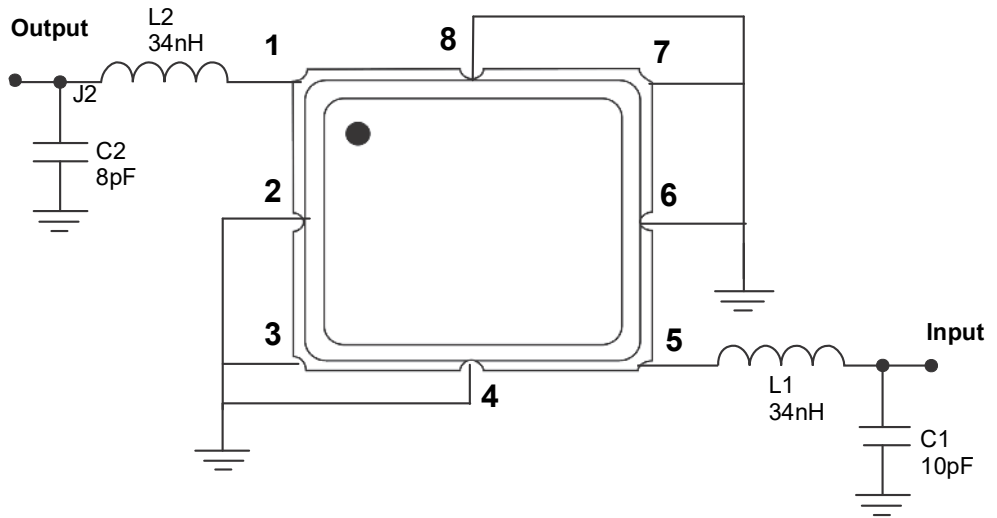
NOTES:

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.

Matching Circuit to 50Ω

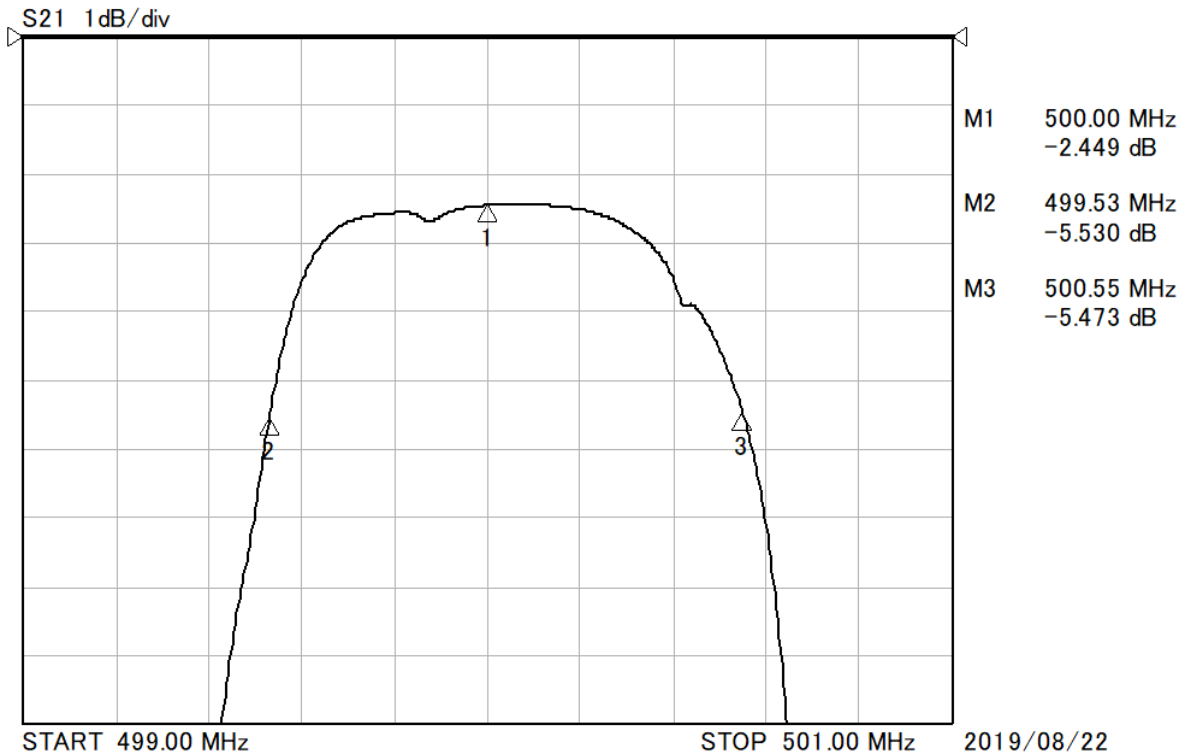
Optional Electrical Connections

Pin	Connection
1	Output
2	To Be Grounded
3	To Be Grounded
4	Case Ground
5	Input
6	To Be Grounded
7	To Be Grounded
8	Case Ground



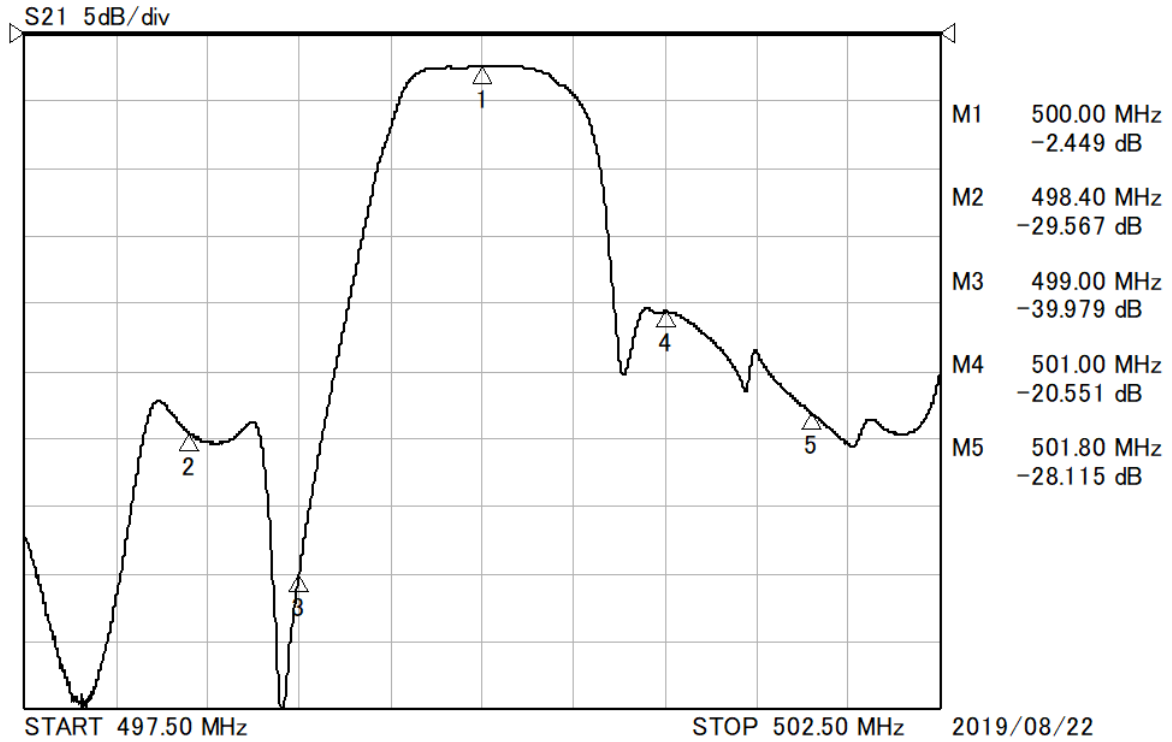
Frequency Characteristics

S21 Response (Span: 2 MHz)

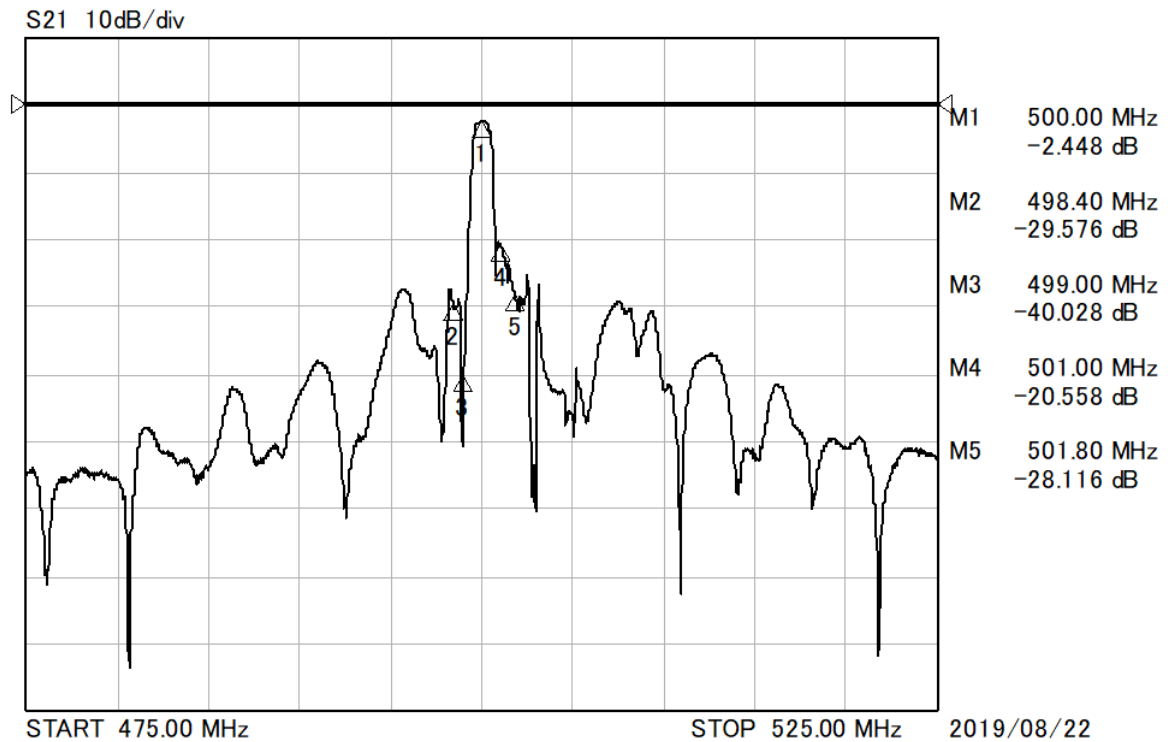


Frequency Characteristics

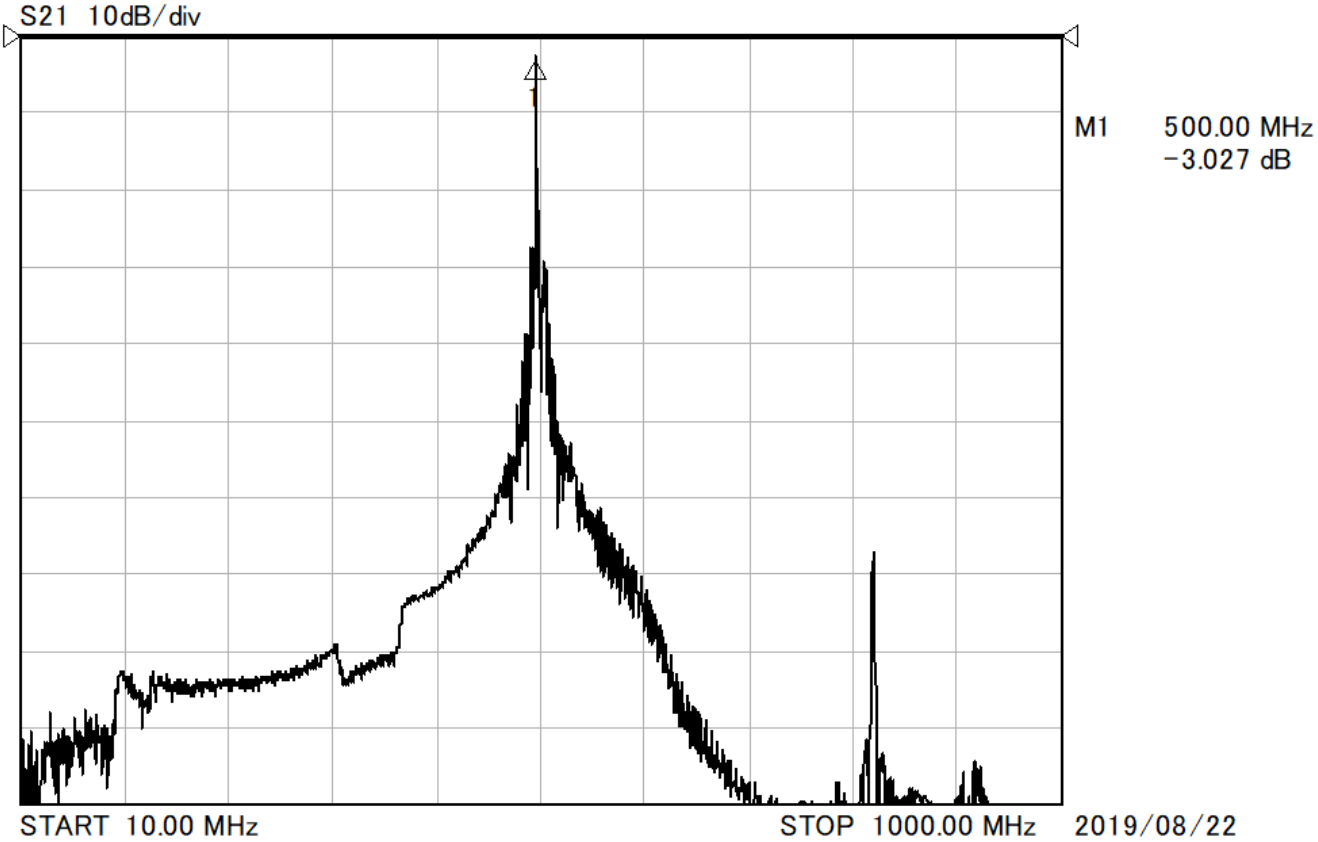
S21 Response (Span: 5 MHz)



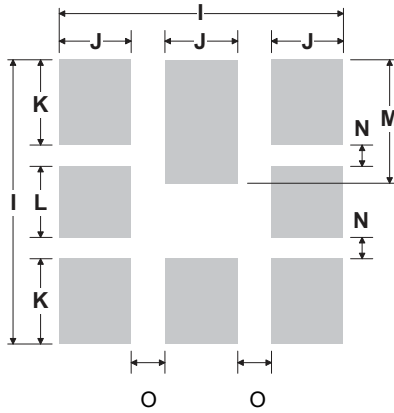
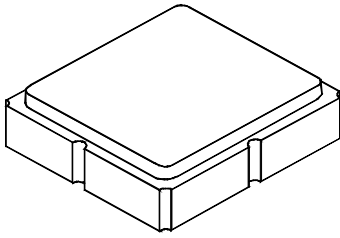
S21 Response (Span: 50 MHz)



S21 Response (Span: 990 MHz)



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



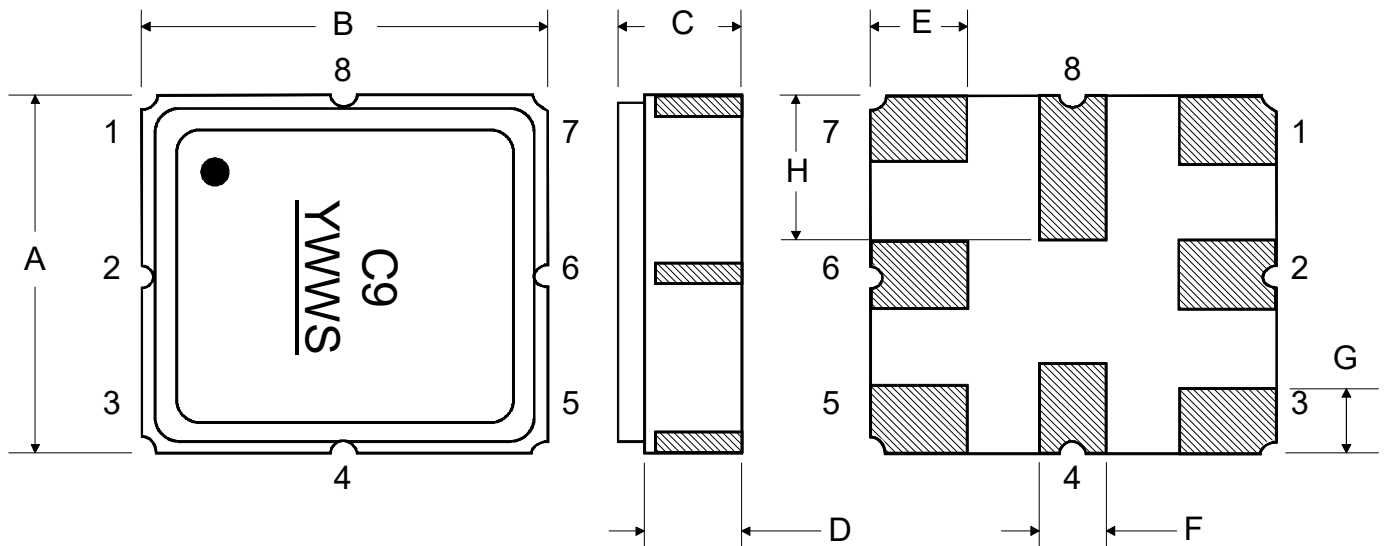
PCB Footprint Top View

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	0.975	1.085	1.215	0.038	0.043	0.048
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



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.

