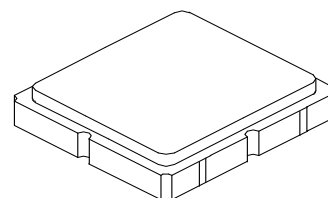


- *Designed for RF Front-end Applications*
- *Low Insertion Loss*
- *3.0 x 3.0 x 1.3 mm Surface-mount Case*
- *No Matching Circuit Required*
- *Complies with Directive 2002/95/EC (RoHS)*
- *Moisture Sensitivity Level: 1*
- *AEC-Q200 Qualified*

SF2124E

**2441.8 MHz
SAW Filter**



SM3030-6

Absolute Maximum Ratings

Rating	Value	Units
Input Power Level	+20	dBm
DC Voltage on any Non-ground Terminal	0	Volts
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-40 to +100	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C
Maximum Soldering Profile - 5 cycles, 10 Seconds Max	260	°C

Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	f_C	1		2441.8		MHz
Insertion Loss, 2400.0 to 2483.5 MHz	IL	at 100°C		2.1	4.0	dB
		at 85°C		2.1	3.2	
		at 25°C		2.1	3.1	
Amplitude Ripple, 2400.0 to 2483.5 MHz				0.9	3.0	dB _{P-P}
Attenuation, referenced to 0 dB						dB
DC to 1700 MHz			20.0	29.0		
1700 to 2200 MHz			25.0	30.0		
2700 to 3100 MHz			30.0	40.0		
3100 to 4000 MHz			20.0	29.0		
4000 to 5000 MHz			10.0	20.0		
VSWR, 2400 to 2483.5 MHz				1.7	2.6	
Source Impedance	Z_S			50		Ω
Load Impedance	Z_L			50		Ω
Single-Ended Input / Output Impedance Match	No matching network required for operation at 50 ohms					
Case Style	SM3030-6 3 x 3 mm Nominal Footprint					
Lid Symbolization, Y=year, WW=week, S=shift	646 YWWS					

Electrical Connections

Pin #	Description	Pin #	Description
1	Ground	4	Ground
2	Input	5	Output
3	Ground	6	Ground

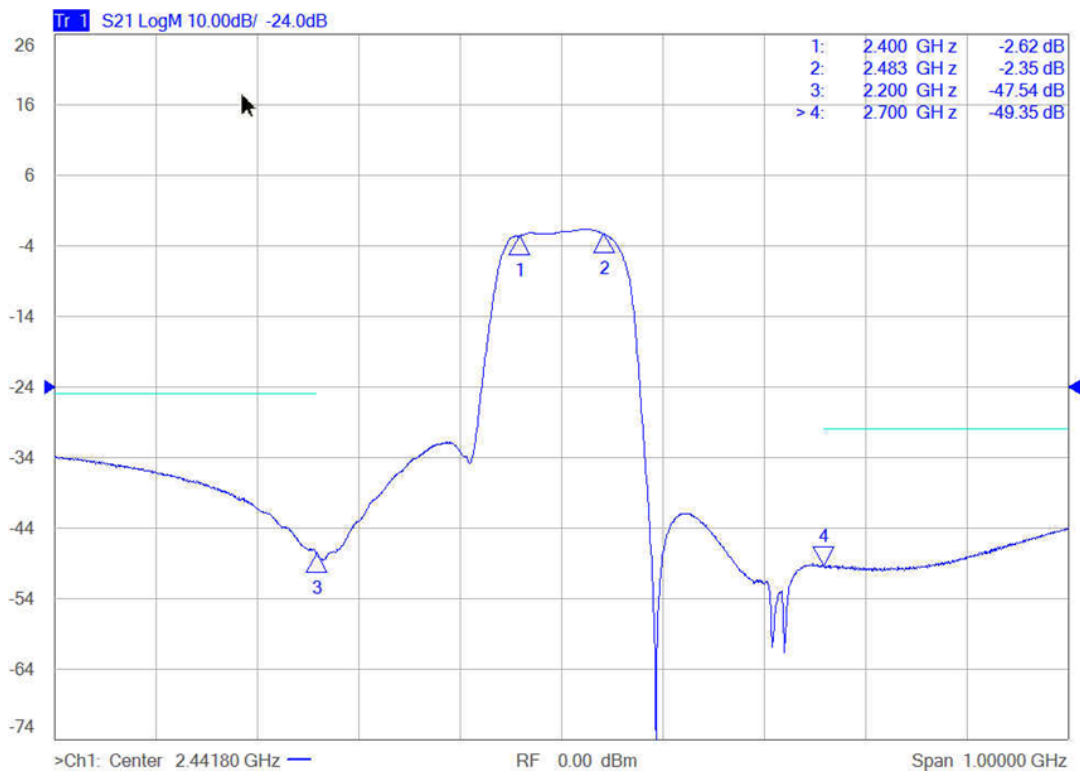
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

NOTES:

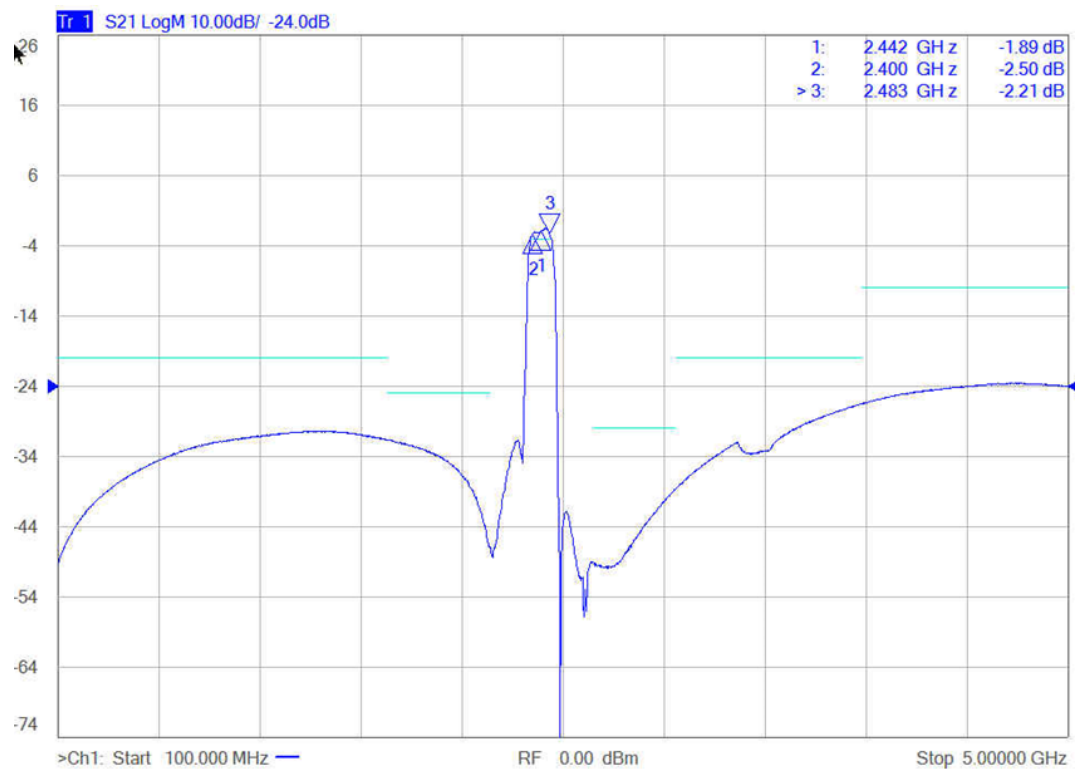
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Frequency Characteristics :

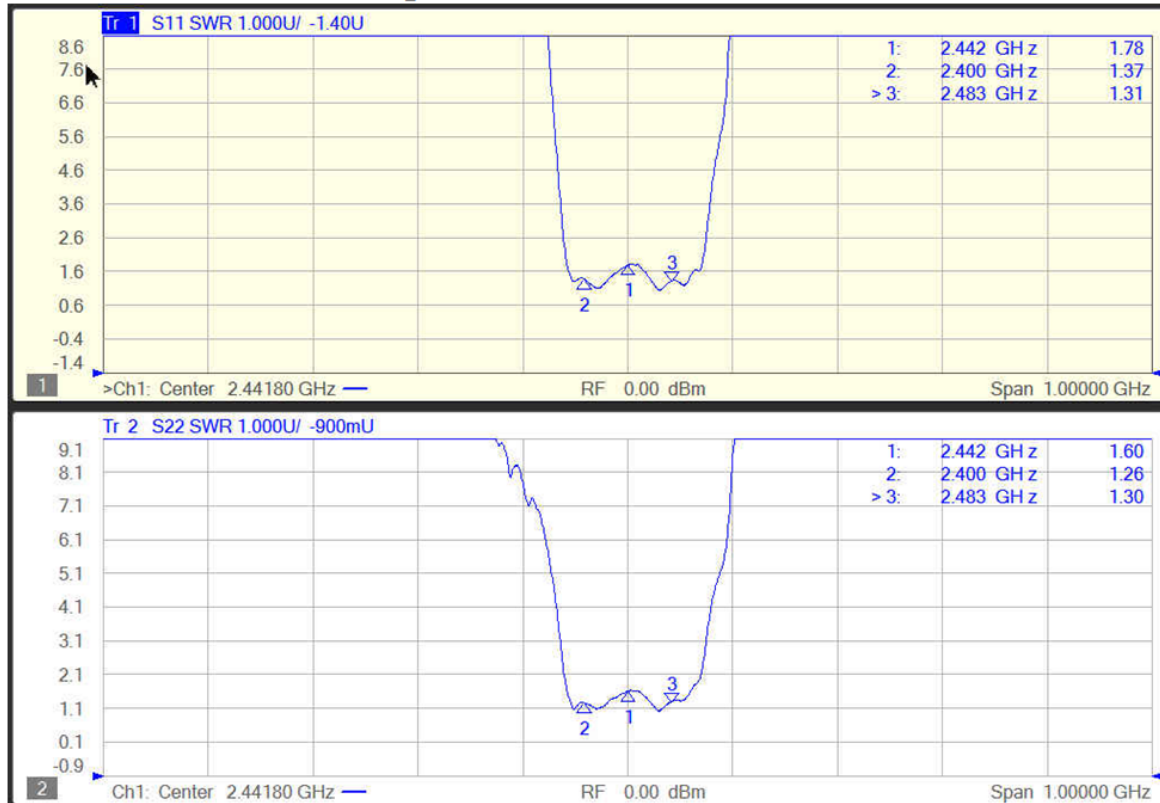
S21 response (span: 1 GHz)



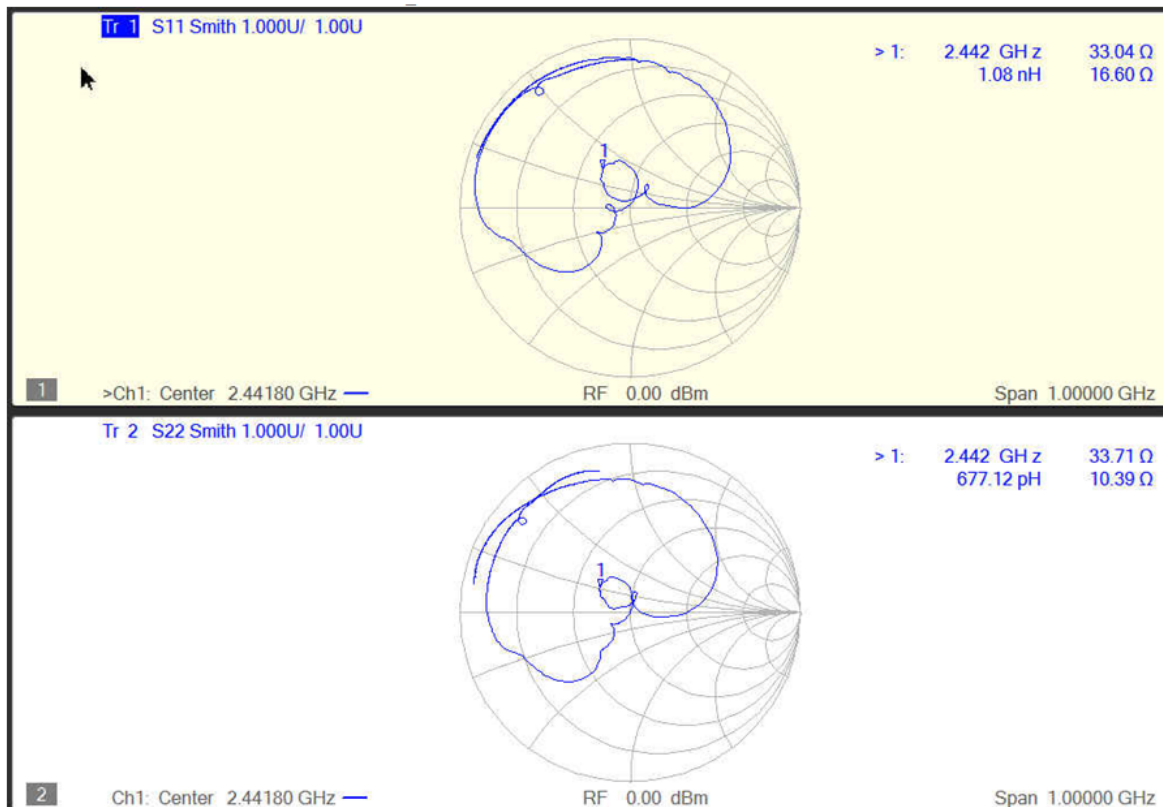
S21 response (span: 100 MHz - 5 GHz)



S11 and S22 SWR:

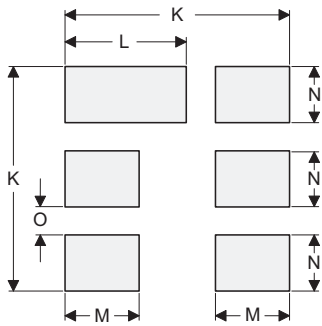
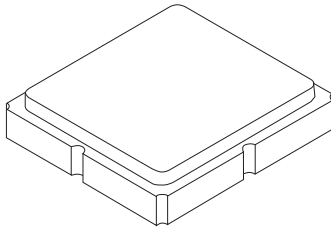


S11 and S22 Smith Chart



SM3030-6 Case

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



PCB Footprint Top View

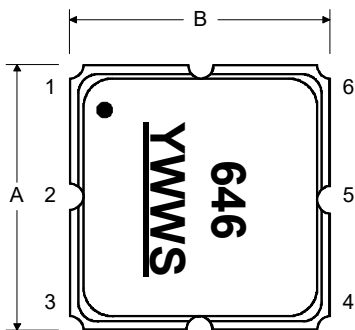
Case and PCB Footprint Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.50	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056
K		3.20			0.126	
L		1.70			0.067	
M		1.05			0.041	
N		0.81			0.032	
O		0.38			0.015	

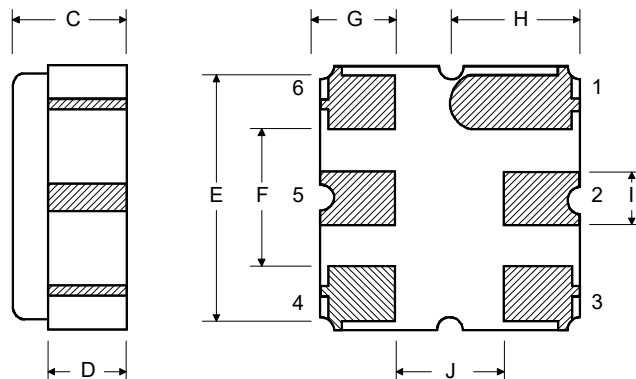
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic

TOP VIEW

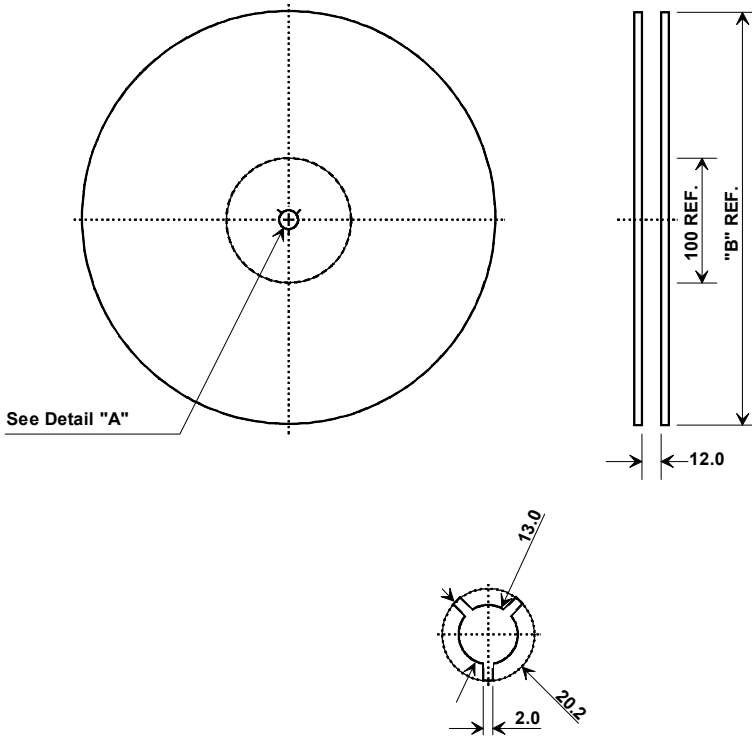


BOTTOM VIEW



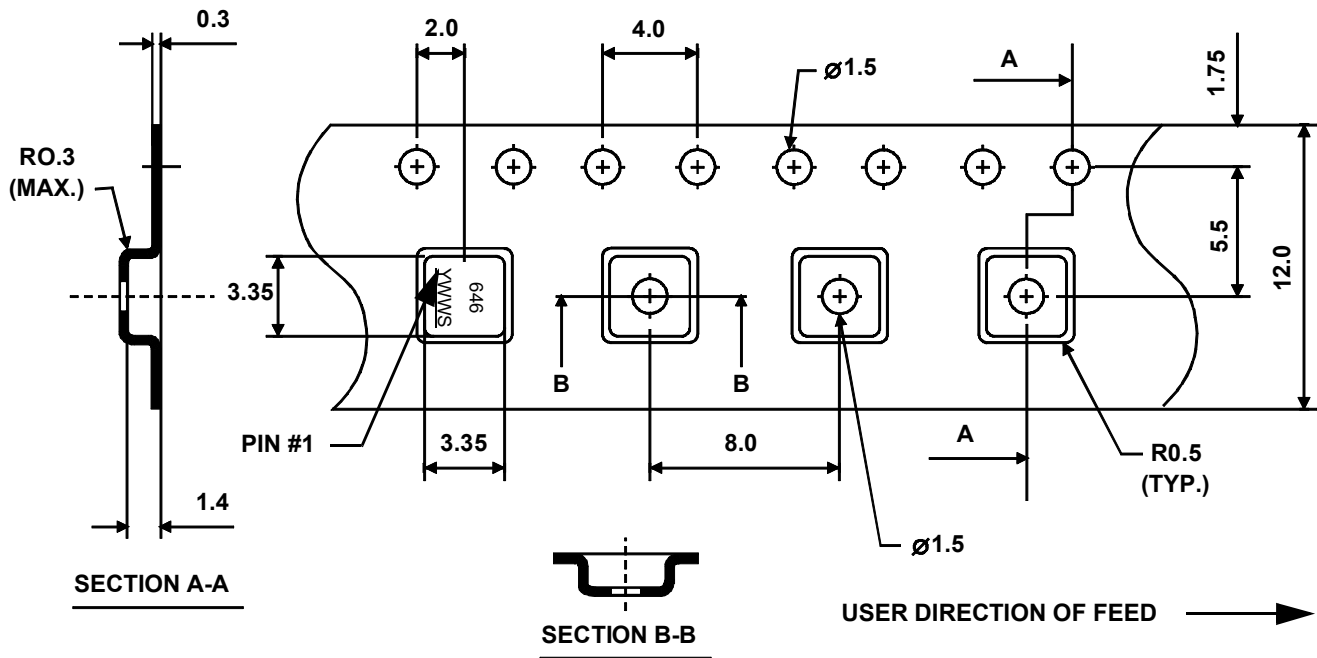
Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA481



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

COMPONENT ORIENTATION



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.

