

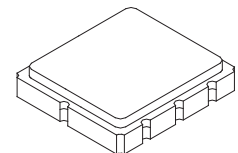


- **Ideal Front-End Filter for European Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Complies with Directive 2002/95/EC (RoHS)**
- **AEC-Q200 Qualified**

RoHS
Compliant

RF3446E

**433.92 MHz
SAW Filter**



**SM3030-6 Case
3.0 x 3.0**

The RF3446E is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 433.92 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen. Typical applications of these receivers are wireless remote-control and security devices operating in Europe under ETSI I-ETS 300 220.

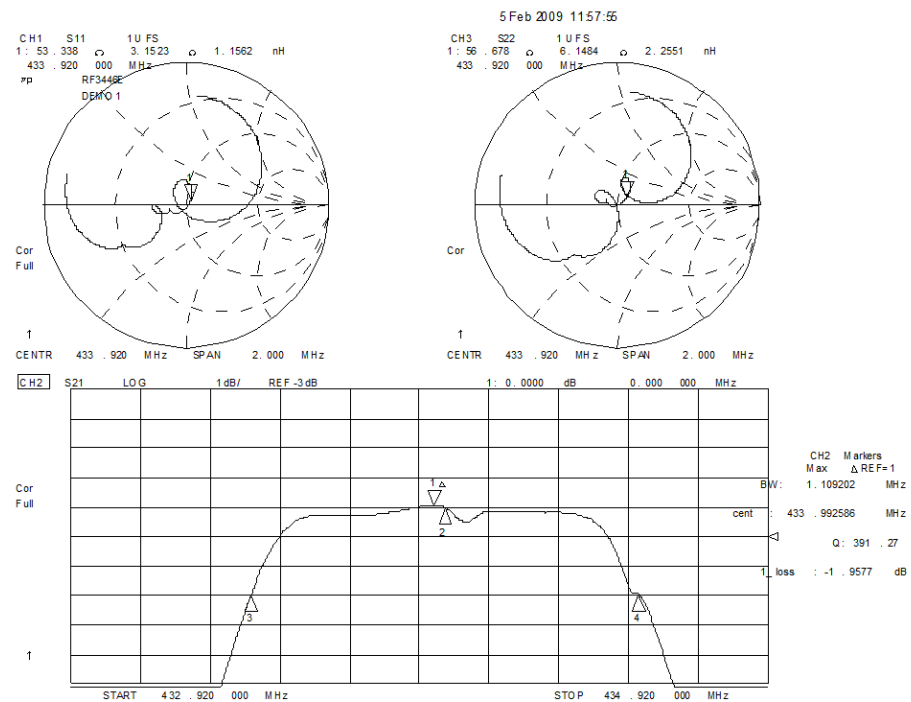
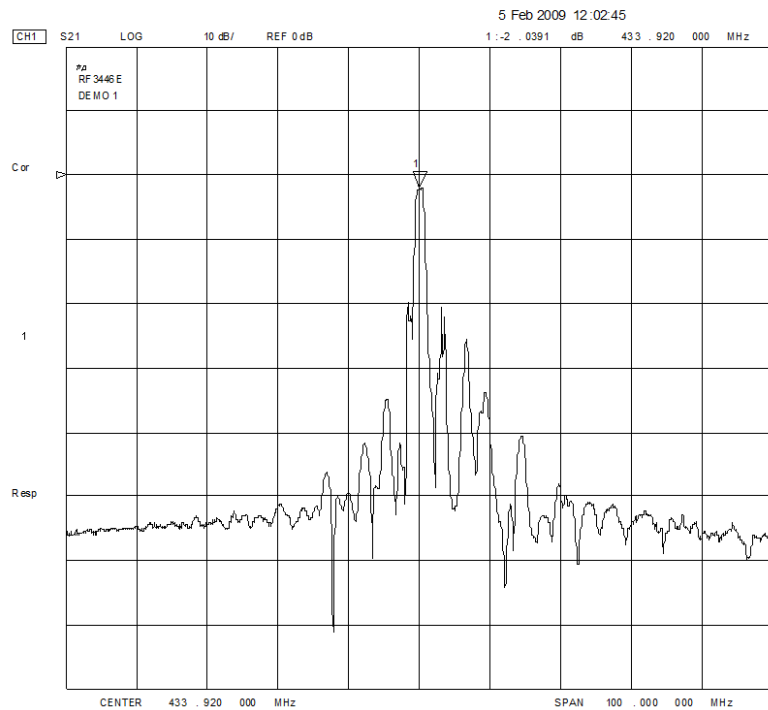
Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C Absolute Frequency	f_c			433.92		MHz
Passband Ripple 433.52 to 434.32 MHz				0.5	1.2	dB
Insertion Loss (433.760 - 434.080)	IL_{MIN}			2.0	3.0	dB
3 dB Bandwidth	BW_3		960	1080	1150	kHz
Rejection Attenuation: (relative to IL_{min})						dB
10 - 418 MHz			47	50		
418 - 423.7 MHz			44	47		
423.7 - 430 MHz			33	36		
430 - 432.5 MHz			16	19		
436 - 438.5 MHz			18	21		
438.5 - 446 MHz			21	24		
446 - 452 MHz			38	41		
452 - 1000 MHz			45	48		
Turnover Temperature	T_o		10	25	40	°C
Temperature Freq. Temp. Coefficient	FTC			0.032		ppm/°C ²
Frequency Aging Absolute Value during the First Year	$ f_A $			≤10		ppm/yr
Impedance @ f_c Input $Z_{IN} = R_{IN} C_{IN}$	Z_{IN}			130 Ω 2.5 pF		
Output $Z_{OUT} = R_{OUT} C_{OUT}$	Z_{OUT}			134.5 Ω 2.48 pF		
Lid Symbolization (Y=year WW=week S=shift)				776, <u>YWWWS</u>		
Standard Reel Quantity Reel Size 7 Inch				500 Pieces/Reel		
Reel Size 13 Inch				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.



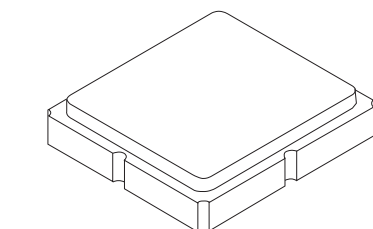
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-55 to +125	°C
Operable Temperature Range	-40 to +105	°C
Soldering Temperature (10 seconds/5 cycles Max..)	260	°C

Case and PCB Footprint Dimensions

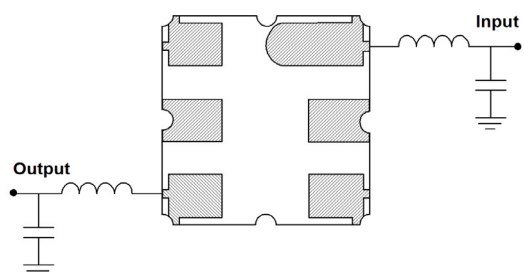
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.00	3.13	0.113	0.118	0.123
B	2.87	3.00	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.60	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	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 µm Gold over 1.27 to 8.89 µm Nickel
Lid Plating	2.0 to 3.0 µm Nickel
Body	Al ₂ O ₃ Ceramic

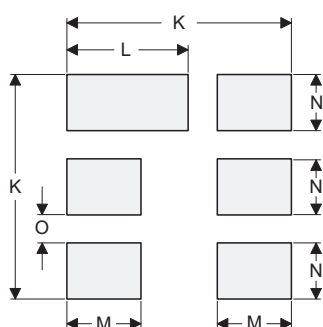


Electrical Connections

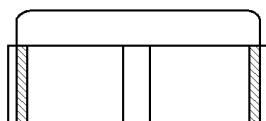
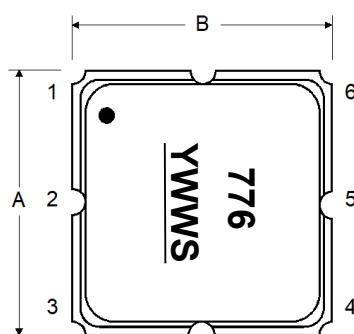


Pin	Connection
1	Input
2	Input Return
3	Ground
4	Output
5	Output Return
6	Ground

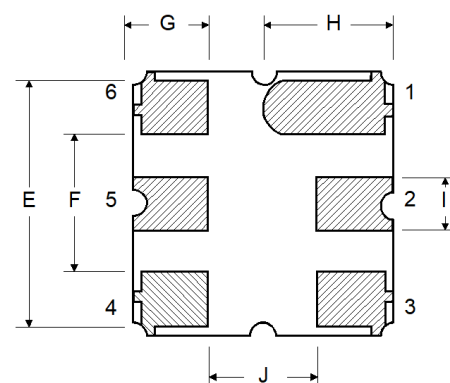
PCB Footprint Top View



TOP VIEW



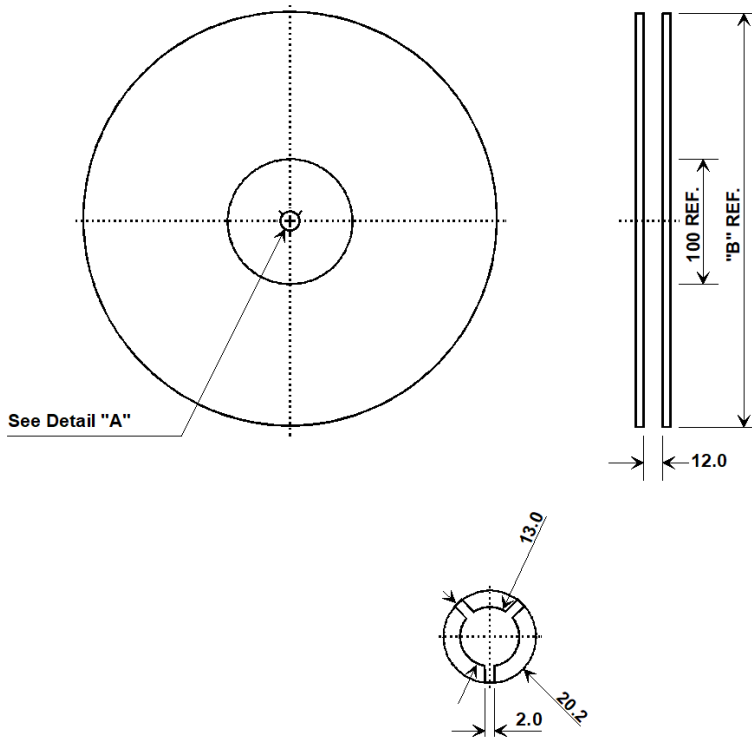
BOTTOM VIEW



Tape and Reel Specifications

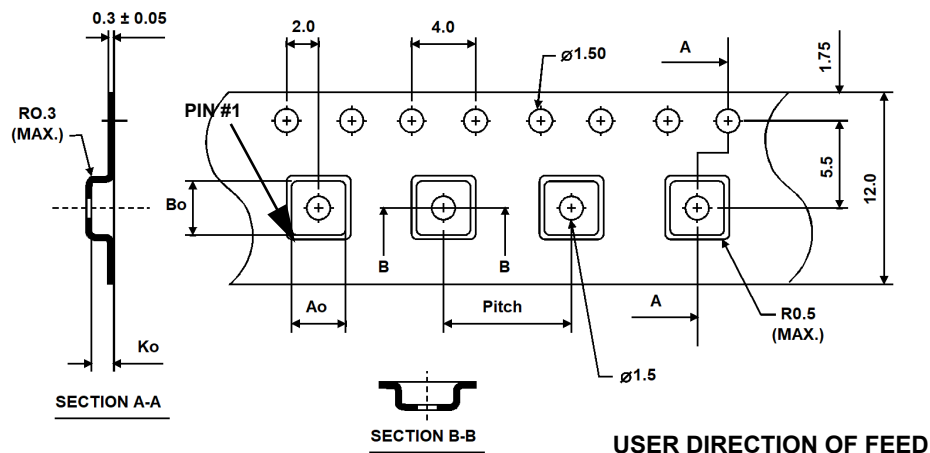
Tape and Reel Standard per ANSI/EIA-481

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



COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	3.35 mm
Bo	3.35 mm
Ko	1.40 mm
Pitch	8.0 mm
W	12.0 mm



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.

