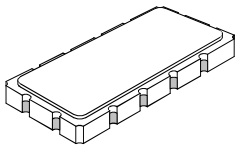
RFM
A BRAND OF AKOUSTIS

PX1004-1

82.2 MHz SAW Filter

- ***Low Insertion Loss***
- ***Excellent Selectivity***
- ***Hermetic 13.3 X 6.5 mm Surface-mount Case***
- ***Single-ended Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***
- ***Moisture Sensitivity Level: 1***

RoHS compliant



SM13365-12

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any 2 Terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Suitable for Lead-free Soldering - Maximum Soldering Profile	260°C for 30 s	

Electrical Characteristics

Characteristic		Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency		f_C			82.20		MHz
Passband	Insertion Loss at fc	IL			3.0	5.5	dB
	3 dB Passband	BW_3		±25	±42		kHz
	Amplitude Ripple over fc ±15 kHz					1.0	dB_{P-P}
	Group Delay Variation over fc ±17 kHz	GDV				6.0	μs_{P-P}
Third-Order Intermod. for -20 dBm tones at fc ±100 & 200 kHz						-95	dBm
Rejection	fc ±100 kHz			11	16		dB
	fc -1500 kHz to fc -1600 kHz			65			
	Ultimate				65		
Operating Temperature Range		T_A		-20		+70	°C

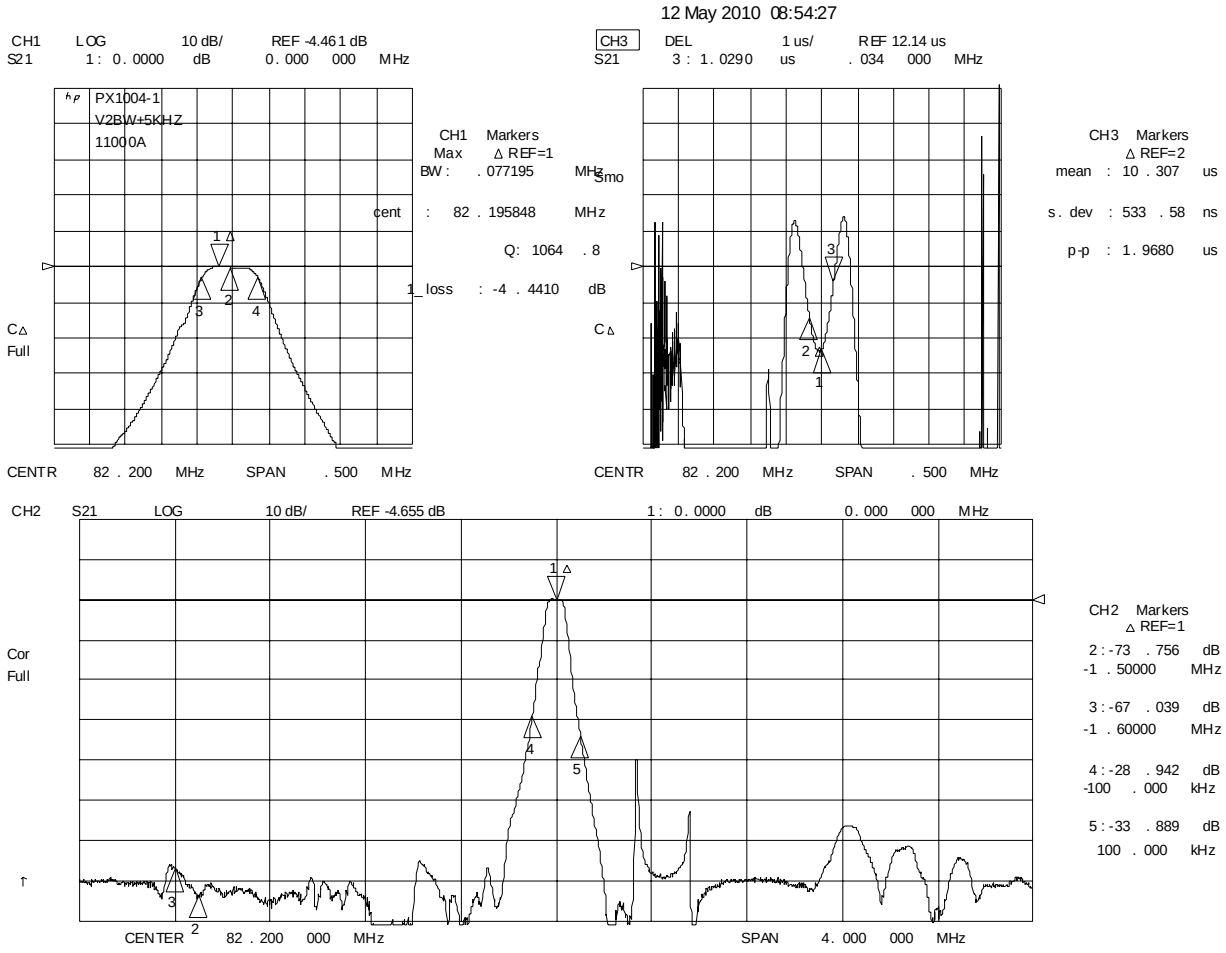
Impedance Matching to 50 Ω unbalanced	External L-C
Case Style	SM13365-12 13.3 X 6.5 mm Nominal Footprint

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

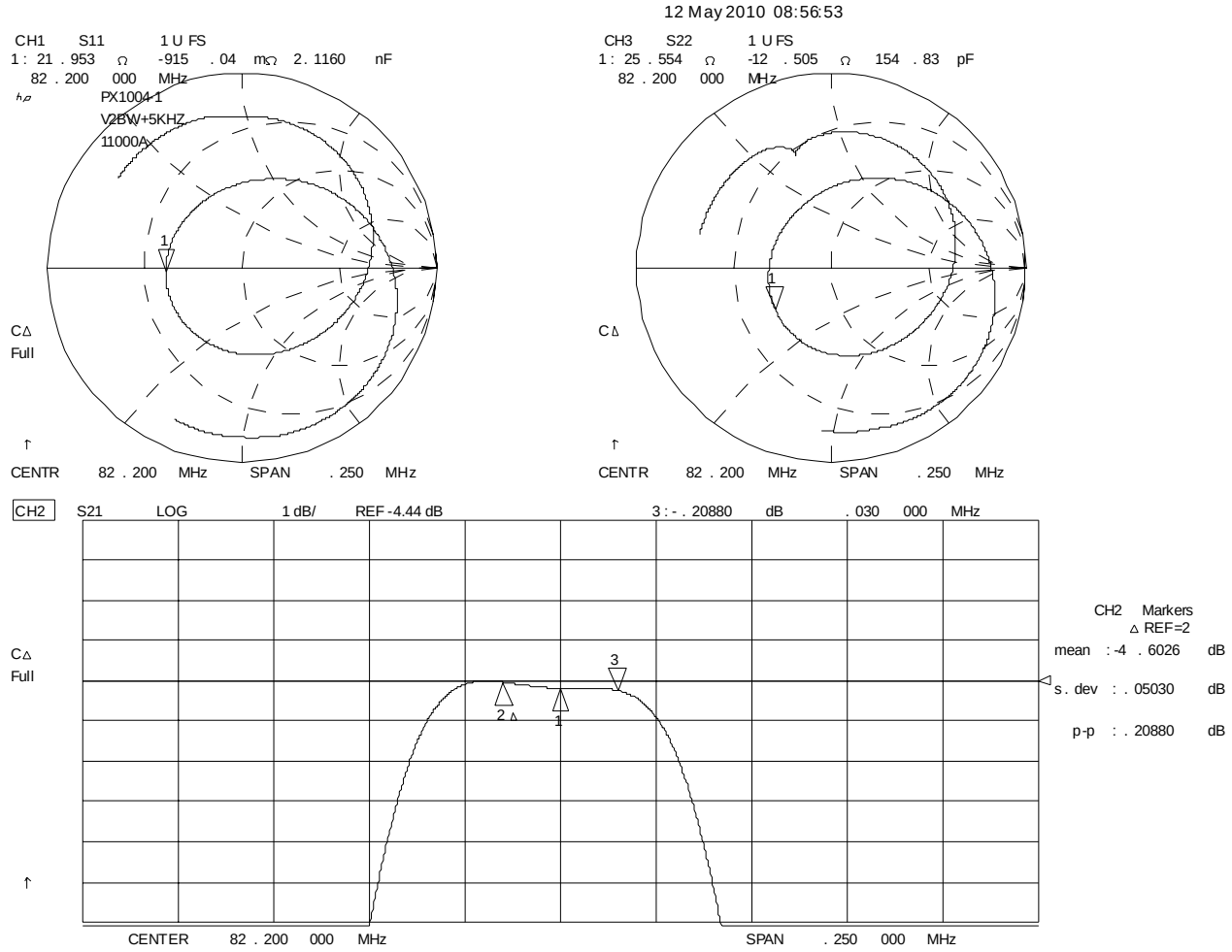
NOTES:

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.

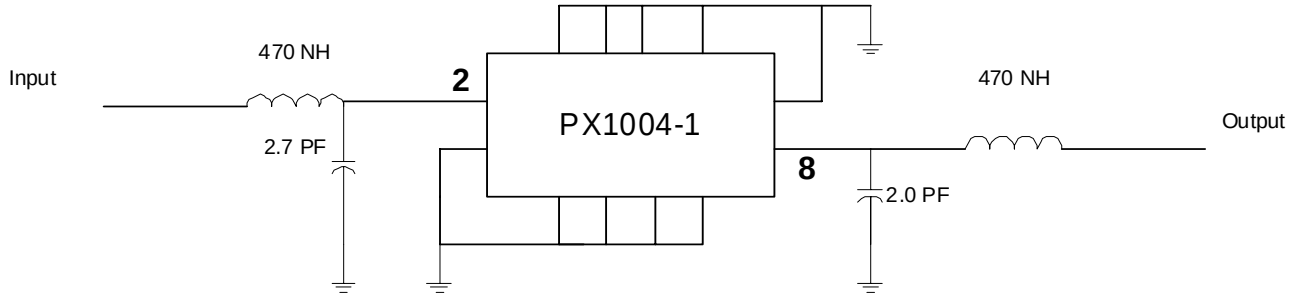
Amplitude and Group Delay Plots



Input/Output Impedance and Passband Amplitude Plots

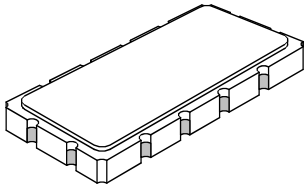


Filter Test Circuit



SM13365-12 Case

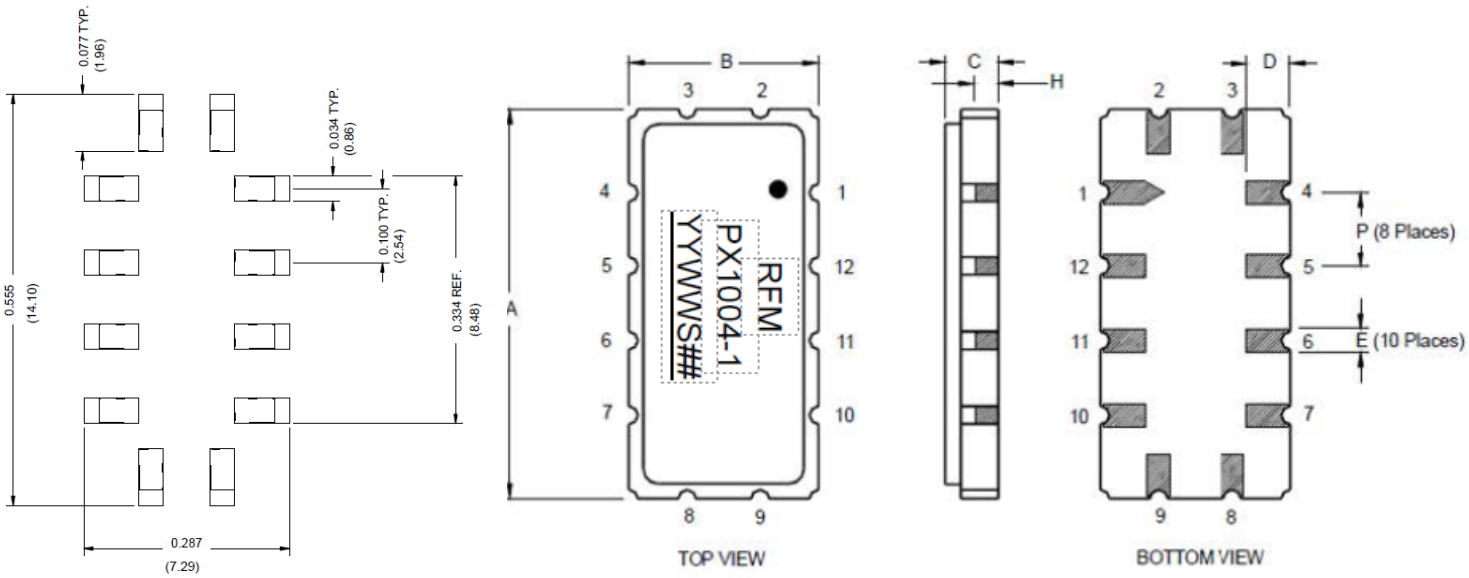
12-Terminal Ceramic Surface-Mount Case
13.3 x 6.5 mm Nominal Footprint



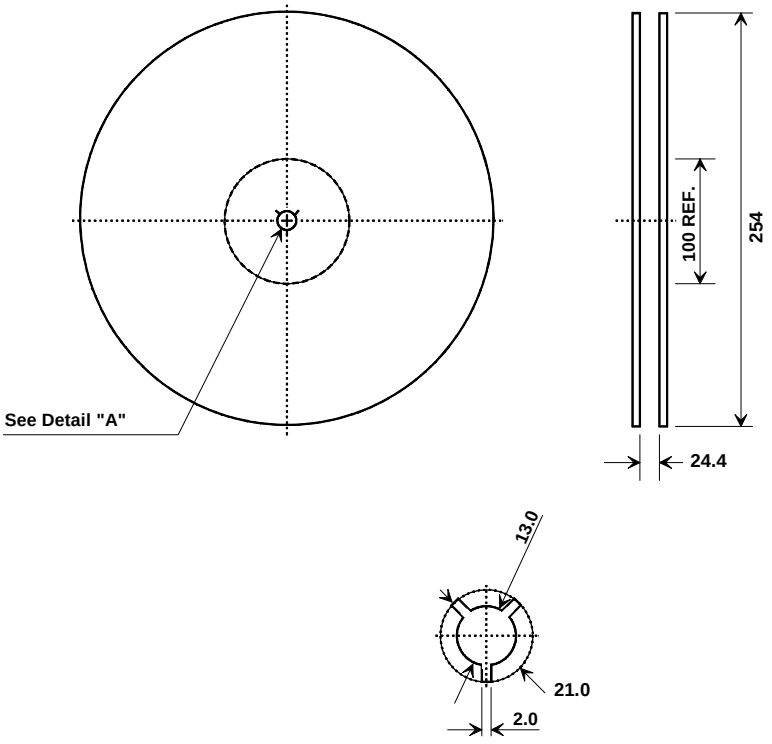
Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	13.08	13.31	13.60	0.515	0.524	0.535
B	6.27	6.50	6.80	0.247	0.256	0.268
C		1.91	2.00		0.075	0.079
D		1.50			0.059	
E		0.79			0.031	
H		1.0			0.039	
P		2.54			0.100	

Materials	
Solder Pad Termination	Au plating 30 - 60 uInches (76.2-152 uM) over 80-200 uInches (203-508 uM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 uInches Thick
Body	Al_2O_3 Ceramic

Symbolization:
YY = Year
WW = Week
S = Shift
= Sequence Code



Tape and Reel Specifications

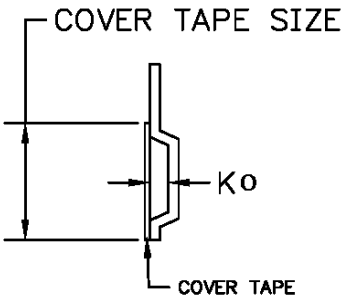


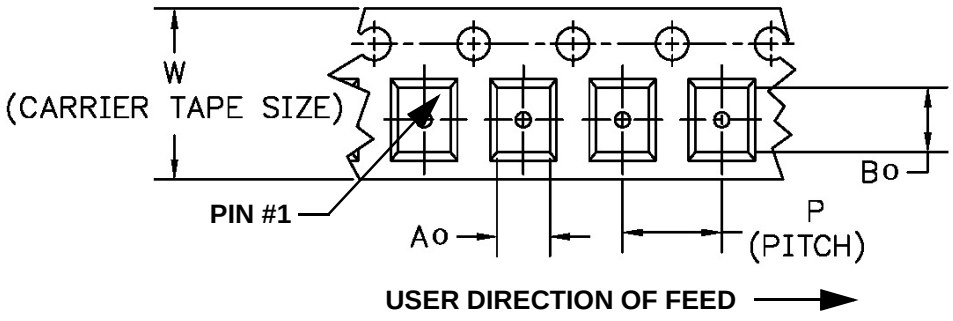
Tape and Reel Standard per ANSI/EIA-481

Quantity Per Reel
1000

COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	7.0 mm
Bo	13.8 mm
Ko	2.0 mm
Pitch	12.0 mm
W	24.0 mm





Recommended Reflow Profile

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