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## PX10004

- Designed for TDMA IS-54 / CDPD IF Applications
- · Low Insertion Loss
- Excellent Selectivity
- Hermetic 13.3 X 6.5 mm Surface-Mount Case
- Unbalanced Input and Output
- Complies with Directive 2002/95/EC (RoHS)



### Absolute Maximum Ratings

Rating	Value	Units		
Maximum Incident Power in Passband	+10	dBm		
Max. DC voltage between any 2 terminals	30	VDC		
Storage Temperature Range -40 to +85 °C				
Suitable for lead-free soldering - Max Soldering Profile	260°C for 30 s			

# 82.2 MHz **SAW Filter**



#### **Electrical Characteristics**

Characteristic			Notes	Min	Тур	Max	Units
Nominal Center Frequency		f <sub>C</sub>	1	82.200			MHz
Passband	Insertion Loss at fc	IL	'		3	4.0	dB
	3 dB Passband	BW <sub>3</sub>		±15	±25		kHz
	Amplitude Ripple over fc ±15 kHz		1, 2			1.0	dB <sub>P-P</sub>
Group Delay Variation over fc ±10 kHz		GDV	1, 2		2.5	6.0	μs <sub>P-P</sub>
Third-Order Intermod. for -20 dBm tones at fc ±60 & 120 kHz						-95	dBm
Rejection	fc ±60 kHz			10	16		
	fc -880 kHz to fc -940 kHz		1, 2, 3	65	68		dB
	Ultimate				65		
Operating Temperature Range		T <sub>A</sub>	1	-20		+70	°C

Impedance Matching to 50 $\Omega$ unbalanced	External L-C	
Case Style	SM13365-12 13.3 X 6.5 mm Nominal Footprint	
Lid Symbolization (YY=year, WW=week) See note 4	RFM PX1004 YYWW	

### **Electrical Connections**

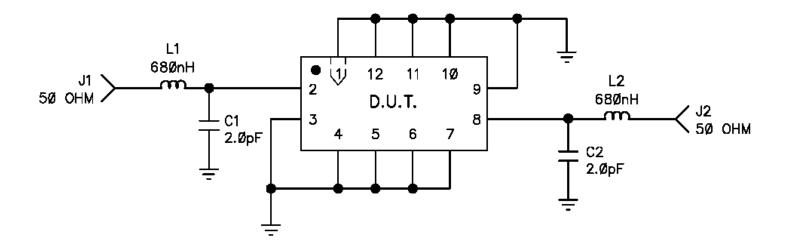
Connection	Terminals
Port 1Hot	2
Port 1 Gnd Return	3
Port 2 Hot	8
Port 2 Gnd Return	9
Case Ground	All Others

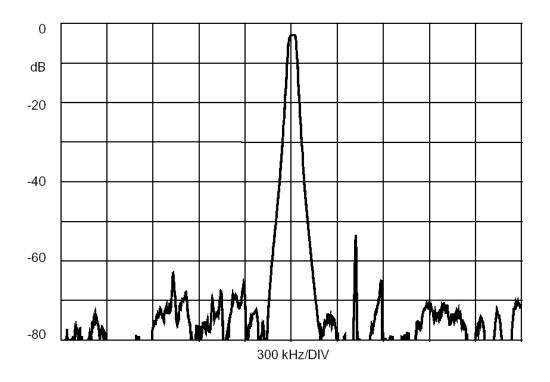


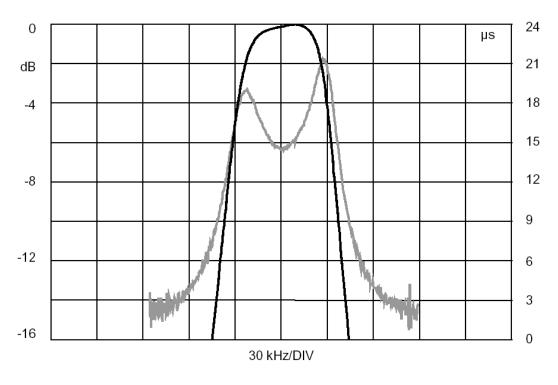
## Caution: Electrostatic Sensitive Device. Observe precautions for handling.

- Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.
- Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
- Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
- The design, manufacturing process, and specifications of this filter are subject 5. to change.
- Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit
- US and international patents may apply.
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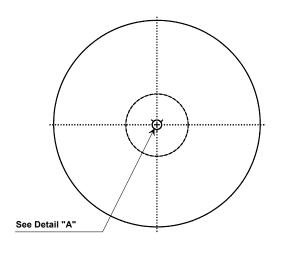
# SCHEMATIC, PX1004 (DEMO)

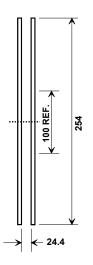




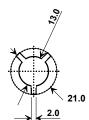


## **Tape and Reel Specifications**

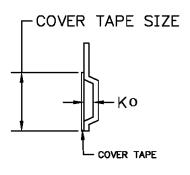




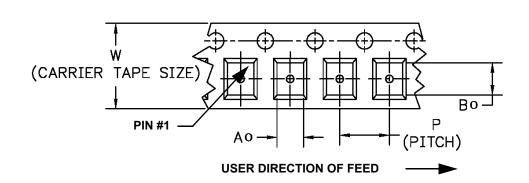
Quantity Per Reel
100 Min
1000 Max



## **COMPONENT ORIENTATION and DIMENSIONS**

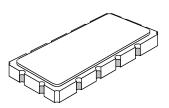


Carrier Tape Dimensions		
Ao	7.0 mm	
Во	13.8 mm	
Ко	2.0 mm	
Pitch	12.0 mm	
W	24.0 mm	



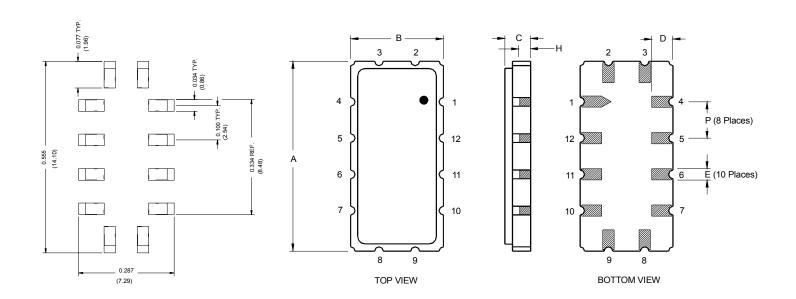
## SM13365-12 Case

# 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
Α	13.08	13.31	13.60	0.515	0.524	0.535
В	6.27	6.50	6.80	0.247	0.256	0.268
С		1.91	2.00		0.075	0.079
D		1.50			0.059	
E		0.79			0.031	
Н		1.0			0.039	
Р		2.54			0.100	·

Materials			
Solder Pad Termination	Au plating 30 - 60 ulnches (76.2-152 uM) over 80-200 ulnches (203-508 uM) Ni.		
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick		
Body	Al <sub>2</sub> O <sub>3</sub> Ceramic		
Pb Free			



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