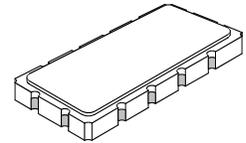


**PX10004**

**82.2 MHz  
SAW Filter**



**SM13365-12**

- *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	

**Electrical Characteristics**

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	$f_C$	1	82.200			MHz
Passband	Insertion Loss at fc	1, 2		3	4.0	dB
	3 dB Passband		$BW_3$	$\pm 15$	$\pm 25$	kHz
	Amplitude Ripple over fc $\pm 15$ kHz					1.0
Group Delay Variation over fc $\pm 10$ kHz	GDV			2.5	6.0	$\mu$ s <sub>P-P</sub>
Third-Order Intermod. for -20 dBm tones at fc $\pm 60$ & 120 kHz					-95	dBm
Rejection	fc $\pm 60$ kHz	1, 2, 3	10	16		dB
	fc -880 kHz to fc -940 kHz		65	68		
	Ultimate			65		
Operating Temperature Range	$T_A$	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 1 Hot	2
Port 1 Gnd Return	3
Port 2 Hot	8
Port 2 Gnd Return	9
Case Ground	All Others

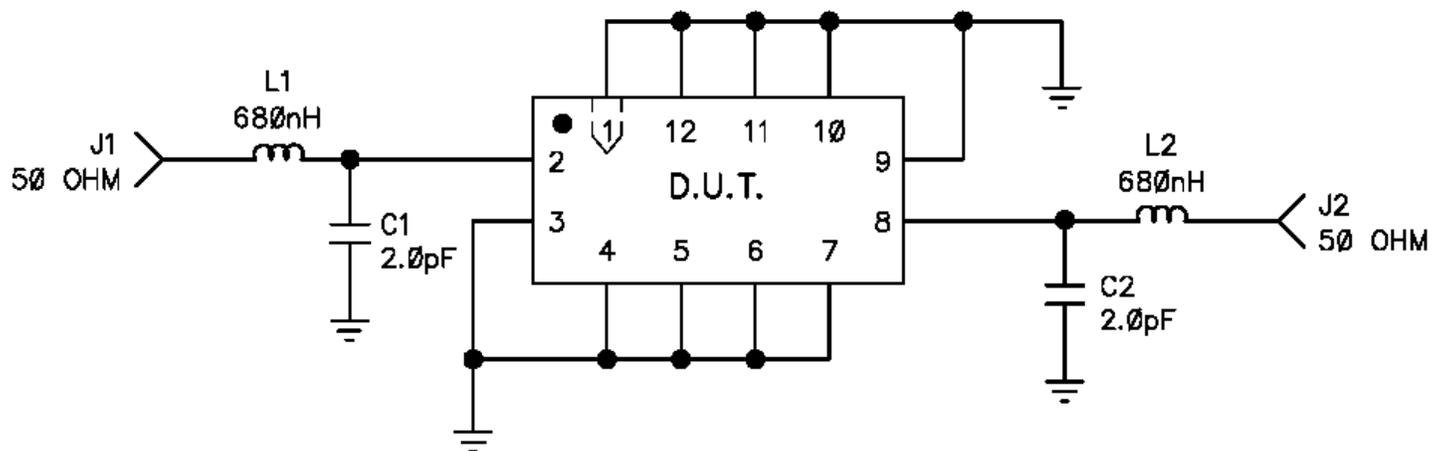


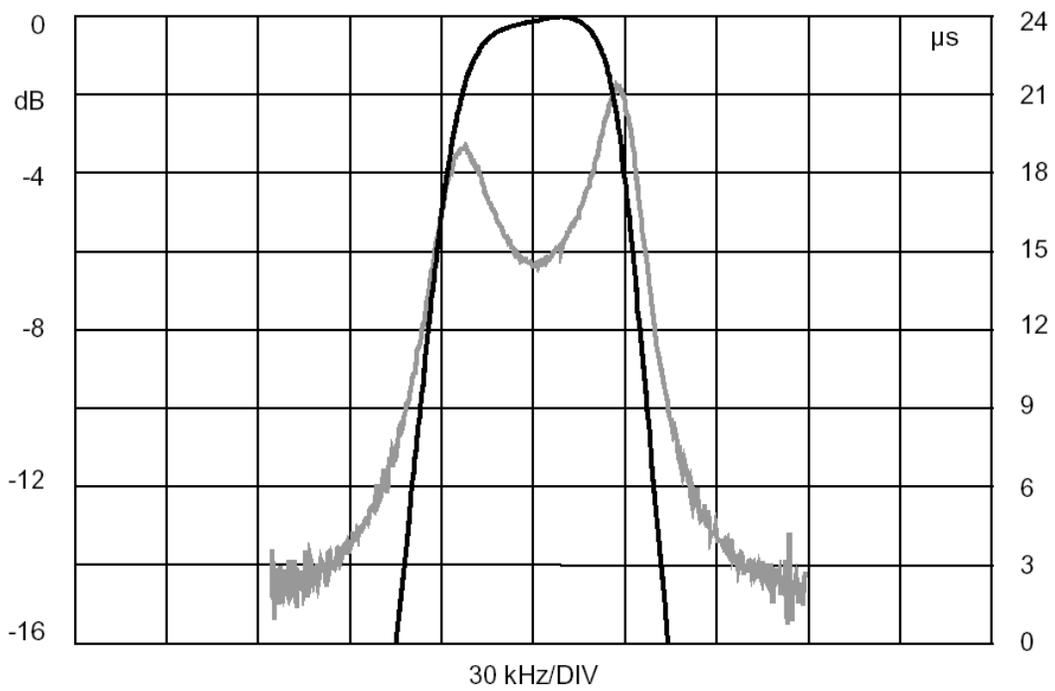
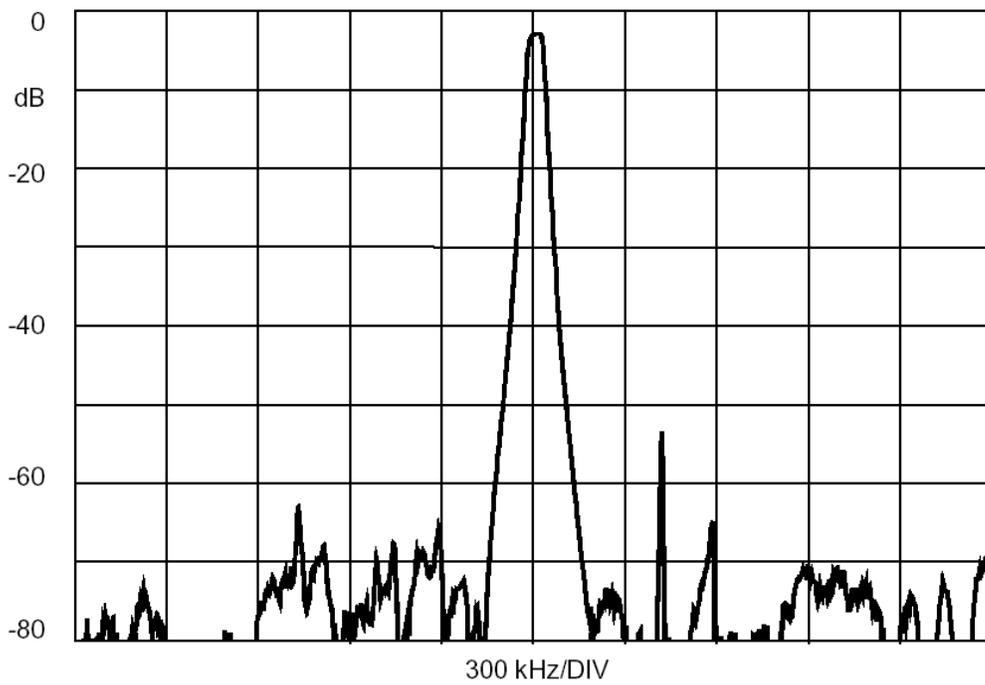
**Caution: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

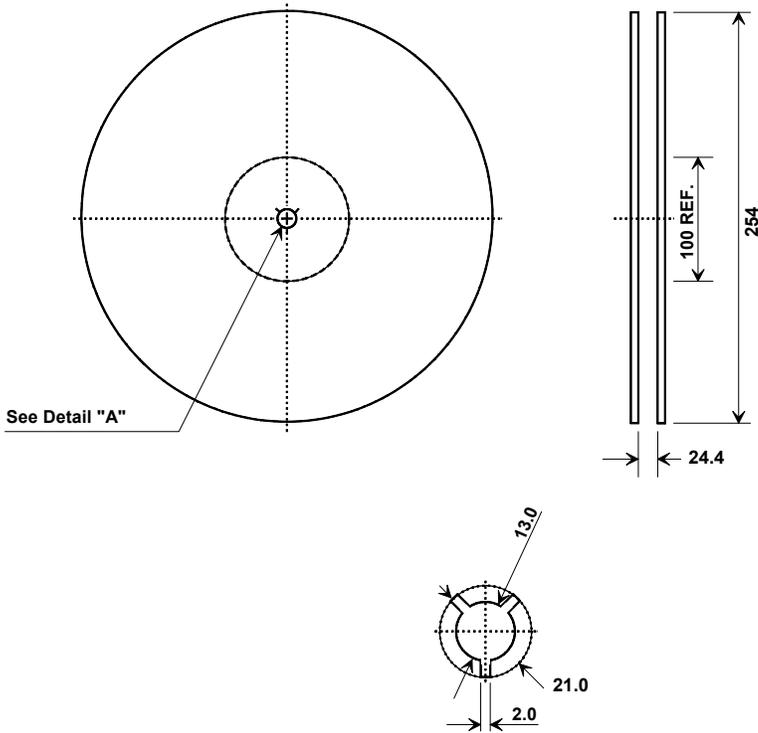
- Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.
- Unless noted otherwise, all frequency specifications are referenced 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 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 design.
- US and international patents may apply.
- Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

SCHEMATIC, PX1004 (DEMO)





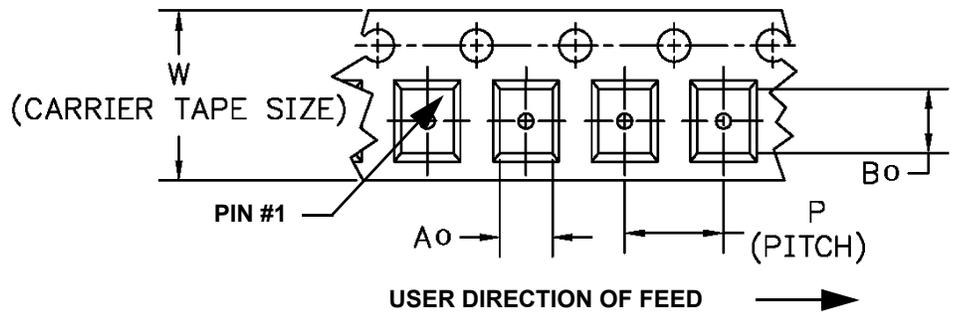
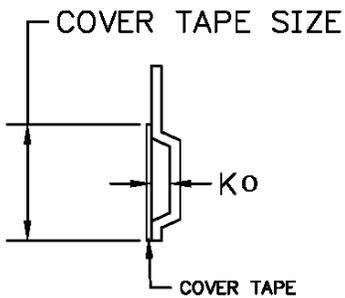
## Tape and Reel Specifications



Quantity Per Reel
100 Min
1000 Max

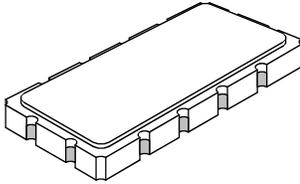
## COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
<b>Ao</b>	7.0 mm
<b>Bo</b>	13.8 mm
<b>Ko</b>	2.0 mm
<b>Pitch</b>	12.0 mm
<b>W</b>	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
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 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	

