

Approved by:

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SPECIFICATION

PRODUCT: **SAW FILTER**

MODEL: **F1044PS**



SHOULDER ELECTRONICS LIMITED

1.SCOPE

SHOULDER's lithium niobium TV- SAW filter series have broad line up products meeting all broadcast standard including NTSC,PAL and SECAM systems. These filters are composed of two interdigital transducers on a Y cut 128° Y LiNbO3 chip in a plastic package. The LiNbO3 substrate was specially developed for the SAW devices and cut and propagation were selected to obtain low temperature coefficient and low bulk wave spurious response.

2.ELECTRICAL SPECIFICATION

2.1 Maximum Rating (Ta = 25 °C Zs=50 Ω ZL=50 Ω)

Characteristics		Ratin	Unit	Sym
Input signal voltage		5	V	Vp-p
DC voltage	between any terminals	12	V	VDC
AC voltage	between any terminal	10	V	Vpp
Operating temperature rang		-20 – 70		TA
Storage temperature range		-40 – 85	°C	Tstg

2.2 Electrical Characteristics

Characteristics	Frequency (MHz)	Specification			Unit
		min	nom	max	
Amplitude Response(dB) Ref:37.4MHz	38.90	5.0	6.0	7.0	dB
	34.47	0	1.0	2.0	
	33.40	19.0	21.0	23.0	
Ref:Peak	32.40	42.0	60.0	—	
	31.90	40.0	55.0		
	40.40	40.0	48.0		
Spurious Response(dB) (Peak)	25.0-32.4	38.0	44.0		
	40.4-45.0	36.0	44.0		
Amplitude ripple Within pass band (p-p)			0.4	0.6	
Group Delay	34.47		50		ns
	36.9		-40		
	38.9		0		
Temperature coefficient			-80		ppm/°C

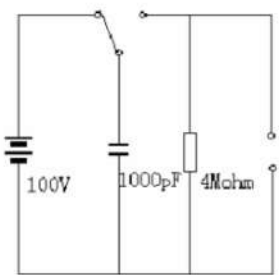
3. ENVIRONMENTAL PERFORMANCE CHARACTERISTICS

Item Test condition	Allowable change of absolute Level at picture frequency(dB)
High temperature test 85°C 500H	< 1.0
Low temperature test 40°C 500H	<1.0
Humidity test 40°C 90-95% 500H	<1.0
Thermal shock -20°C==25°C==80°C 5 cycle 30M 10M 30M	<1.0
Solder temperature test Sold temp.260°C for 10 sec.	<1.0
Soldering Immerse the pins melt solder at 260°C+5/-0°C for 5 sec.	More then 95% of total area of the pins should be covered with solder

4.MECHANICAL TEST

Item Test condition	Allowable change of absolute Level at picture frequency(dB)
Vibration test 600-3300rpm amplitude 1.5mm 3 directions 2 H each	<1.0
Drop test On maple plate from 1m high 3 times	<1.0
Lead pull test Pull with 1 kg force For 30 seconds	<1.0
Lead bend test 90° bending.with 500g weigh 2 times	<1.0

5. VOLTAGE DISCHARGE TEST

Item Test condition	Allowable change of absolute Level at picture frequency(dB)
Surge test Between any two electrode 	<1.0

6.DIMENSION

