

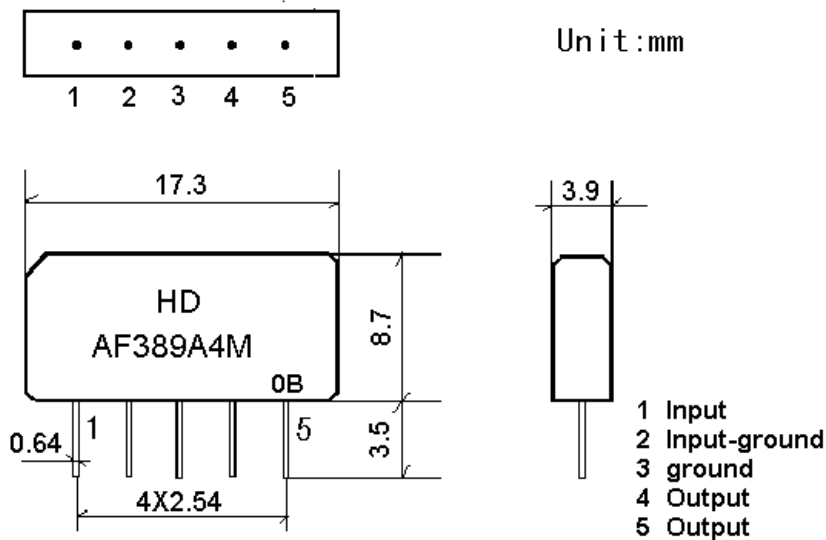
1.SCOPE

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 single-crystal, piezoelectrical chip. They are used in electronic equipments such as TV and so on.

2.Construction

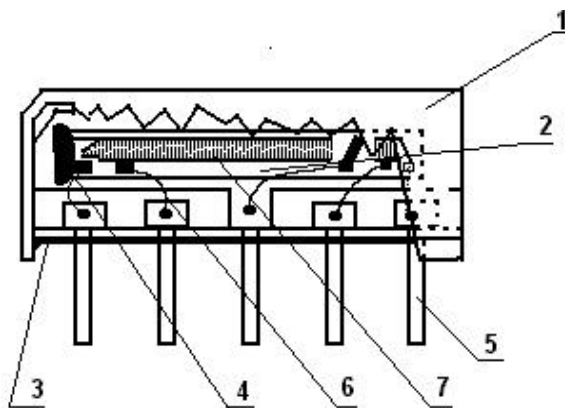
2.1 Dimension and materials

Type : AF389A4M



0: year(0,1,2,3,4,5,6,7,8,9)

B:product in this quarter(A:1~3,B:4~6,C:7~9,D:10~12)



Components	Materials
1.Outer casing	PPS
2.Substrate	Lithium niobate
3.Base	Epoxy resin
4.Absorber	Epoxy resin
5.Lead	Cu alloy+Au plate
6.Bonding wire	AlSi alloy
7.Electrode	Al

[illegible]

3.1 Maximum Rating

DC voltage	VDC	12	V	Between any terminals
AC voltage	Vpp	10	V	Between any terminals

3.2 Electrical Characteristics

Source impedance

$Z_s=50\Omega$

Load impedance

$Z_L=2k\Omega//3pF$

$T_A=25^{\circ}\text{C}$

Item	Freq	min	typ	max	
Insertion attenuation Reference level	33.05MHz	11.6	13.6	15.6	dB
Relative attenuation	33.40MHz	-0.1	1.4	2.9	dB
	32.80MHz	-	0.9	-	dB
	38.90MHz	38.0	45.0	-	dB
	34.47MHz	25.0	35.0	-	dB
	30.90MHz	30.0	36.0	-	dB
	31.90MHz	32.0	40.0	-	dB
	40.40MHz	40.0	50.0	-	dB
	41.40MHz	40.0	45.0	-	dB
Sidelobe	25.00~31.90MHz	30.0	36.0	-	dB
	40.40~45.00MHz	35.0	42.0	-	dB
Temperature coefficient		-72			ppm/k

3.3 Environmental Performance Characteristics

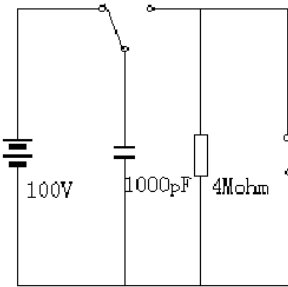
Item Test condition	Allowable change of absolute Level at center frequency(dB)
High temperature test 70°C 1000H	< 1.0
Low temperature test -40°C 1000H	< 1.0
Humidity test 40°C 90-95% 1000H	< 1.0
Thermal shock $-20^{\circ}\text{C}==25^{\circ}\text{C}==80^{\circ}\text{C}$ 20 cycle 30M 10M 30M	< 1.0
Solder temperature test Sold temp. 260°C for 10 sec.	< 1.0
Soldering Immerse the pins melt solder at $260^{\circ}\text{C}+5/-0^{\circ}\text{C}$ for 5 sec.	More then 95% of total area of the pins should be covered with solder

3.4 Mechanical Test

Item Test condition	Allowable change of absolute Level at center frequency(dB)
Vibration test 600-3300rpm amplitude 1.5mm 3 directions 2 H each	<1.0
Drop test	<1.0

On maple plate from 1 m high 3 times	
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

3.5 Voltage Discharge Test

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

3.6 Frequency response:

