

规格书编号

SPEC NO :

产品规格书

SPECIFICATION

CUSTOMER 客户: _____
PRODUCT 产品: _____ SAW FILTER _____
MODEL NO 型号: _____ HDQSF45A3Dc SIP5Dc _____
PREPARED 编制: _____ CHECKED 审核: _____
APPROVED 批准: _____ D A T E 日期: _____ 2008-6-14 _____

客户确认 CUSTOMER RECEIVED:		
审核 CHECKED	批准 APPROVED	日期 DATE

无锡市好达电子股份有限公司
Shoulder Electronics Limited

1.SCOPE

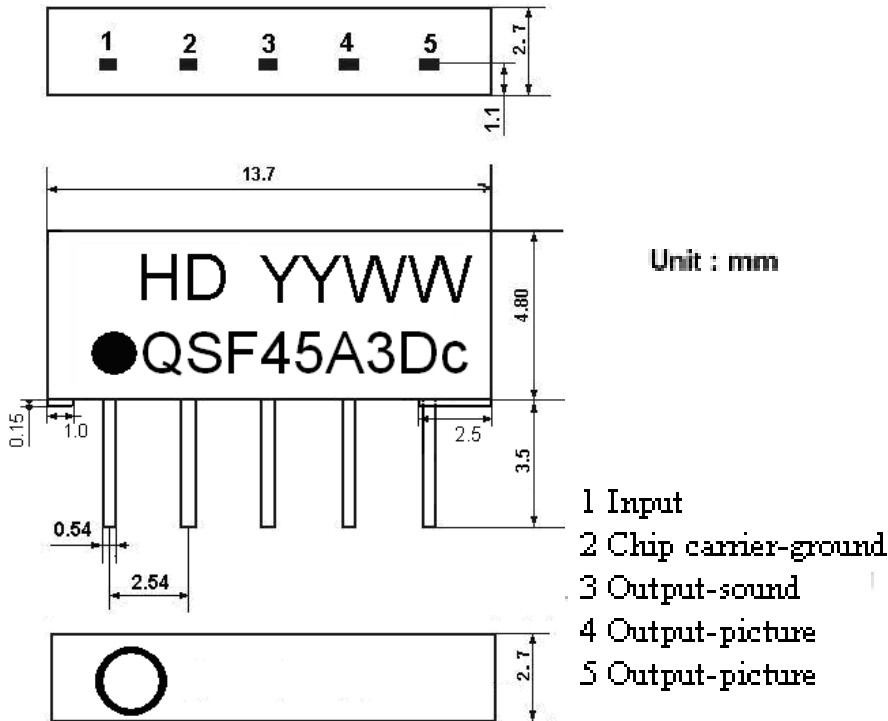
SHOULDER’s SAW filter series have broad line up products meeting all broadcast standard including NTSC,PAL and SECAM systems. These filters are composed of two interdigital transducers on a single-crystal, piezoelectrical chip. they are used in electronic equipments such as TV and so on.

2.Construction

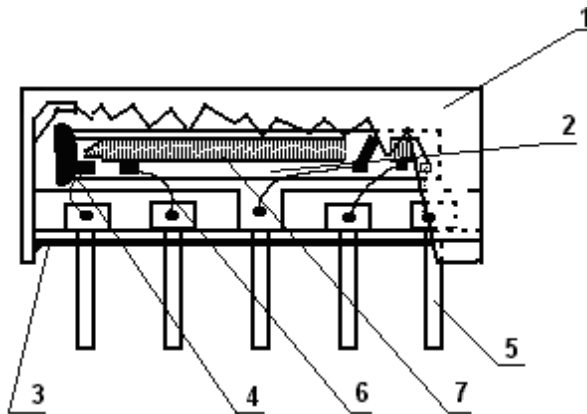
2.1 Dimension and materials

Manufacturer’s name : SHOULDER ELECTRONICS LTD

Type : QSF45A3Dc



YY:year
WW:week



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

3.1 Maximum Rating

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

3.2 Electrical Characteristics
Characteristics of picture channel

Source impedance

$Z_S=50\ \Omega$

Load impedance

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

$T_A=25^\circ C$

Item	Freq	min	typ	max	
Insertion attenuation Reference level	44.06MHz	11.0	13.0	15.0	dB
Relative attenuation	45.81MHz	4.7	6.2	7.7	dB
	42.23MHz	-1.0	0.5	2.0	dB
	41.31MHz	25.0	41.0	-	dB
	39.81MHz	42.0	56.0	-	dB
	47.31MHz	42.0	52.0	-	dB
Sidelobe	35.06~39.81MHz	35.0	42.0		dB
	47.31~55.06MHz	34.0	40.0		dB
Reflected wave signal suppression 1.2 us ... 6.0 us after main pulse (test pulse 250 ns , carrier frequency 44.06 MHz)		40.0	52.0		dB
Feedthrough signal suppression 1.2 us ... 6.0 us after main pulse (test pulse 250 ns , carrier frequency 44.06 MHz)		45.0	55.0		dB
Group delay ripple (p-p)		-	50	-	ns
Temperature coefficient		-72			ppm/k

Characteristics of sound channel

Source impedance

 $Z_s=50\ \Omega$

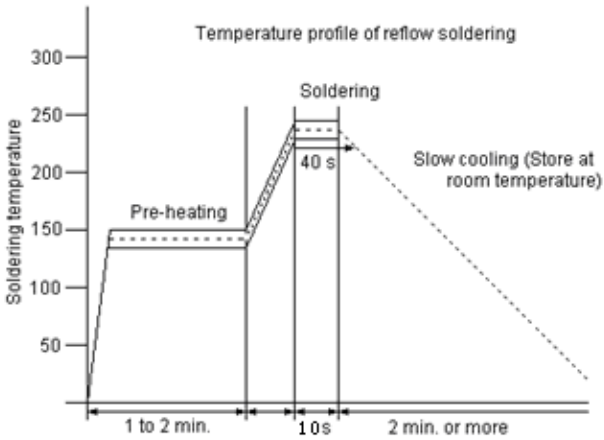
Load impedance

 $Z_L=2k\ \Omega //3pF$
 $T_A=25^\circ C$

		Freq	min	typ	max	
Insertion attenuation		41.31MHz	-	16.9	-	dB
	Reference level					
Relative attenuation		42.23MHz	15.0	30.0	-	dB
		45.81MHz	32.0	41.0	-	dB
		39.81MHz	27.0	45.0	-	dB
		47.31MHz	33.0	42.0	-	dB
Sidelobe	35.06~39.81MHz		30.0	40.0		dB
	47.31~55.06MHz		30.0	38.0		dB
Temperature coefficient				-72		ppm/K

3.3 Environmental Performance Characteristics

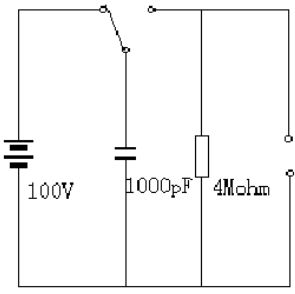
Item	Condition	Specifications		
High temperature	The specimen shall be store at a temperature of $80\pm 2^\circ C$ for $96\pm 4h$. Then it shall be subjected to standard atmospheric conditions for 1h, after which measurement shall be made within 1h.	Mechanical characteristics and specifications in electrical characteristics shall be satisfied. There shall be no excessive change in appearance.		
Low temperature	The specimen shall be store at a temperature of $-20\pm 3^\circ C$ for $96\pm 4h$. Then it shall be subjected to standard atmospheric conditions for 1h, after which measurement shall be made within 1h.			
Humidity	The specimen shall be store at a temperature of $40\pm 2^\circ C$ with relative humidity of 90% to 96% for $96\pm 4h$. Then it shall be subjected to standard atmospheric conditions for 1h, after which measurement shall be made within 1h.			
Thermal shock	The specimen shall be subjected to 8 continuous cycles each as shown below. Then it shall be subjected to standard atmospheric conditions for 1h, after which measurement shall be made within 1h.			
			Temperature	Duration
		1	$+25^\circ C \Rightarrow -40^\circ C$	0.5h
		2	$-40^\circ C$	4h
		3	$-40^\circ C \Rightarrow +85^\circ C$	2h
		4	$+85^\circ C$	4h
		5	$+85^\circ C \Rightarrow +25^\circ C$	0.5h
6	$+25^\circ C$	1h		
Resistance to	Reflow soldering method			

<p>Soldering heat</p>	<p>Peak: 255 ±5 °C, 220 ±5 °C, 40s At electrode temperature of the specimen.</p>  <p>The specimen shall be passed through the reflow furnace with the condition shown in the above profile for 1 time. The specimen shall be stored at standard atmospheric conditions for 1h, after which the measurement shall be made. Test board shall be 1.6 mm thick. Base material shall be glass fabric base epoxy resin.</p>	
<p>Solder ability</p>	<p>Immerse the pins melt solder at 260°C+5/-0°C for 5 sec.</p>	<p>More then 95% of total area of the pins should be covered with solder</p>

3.4 Mechanical Test

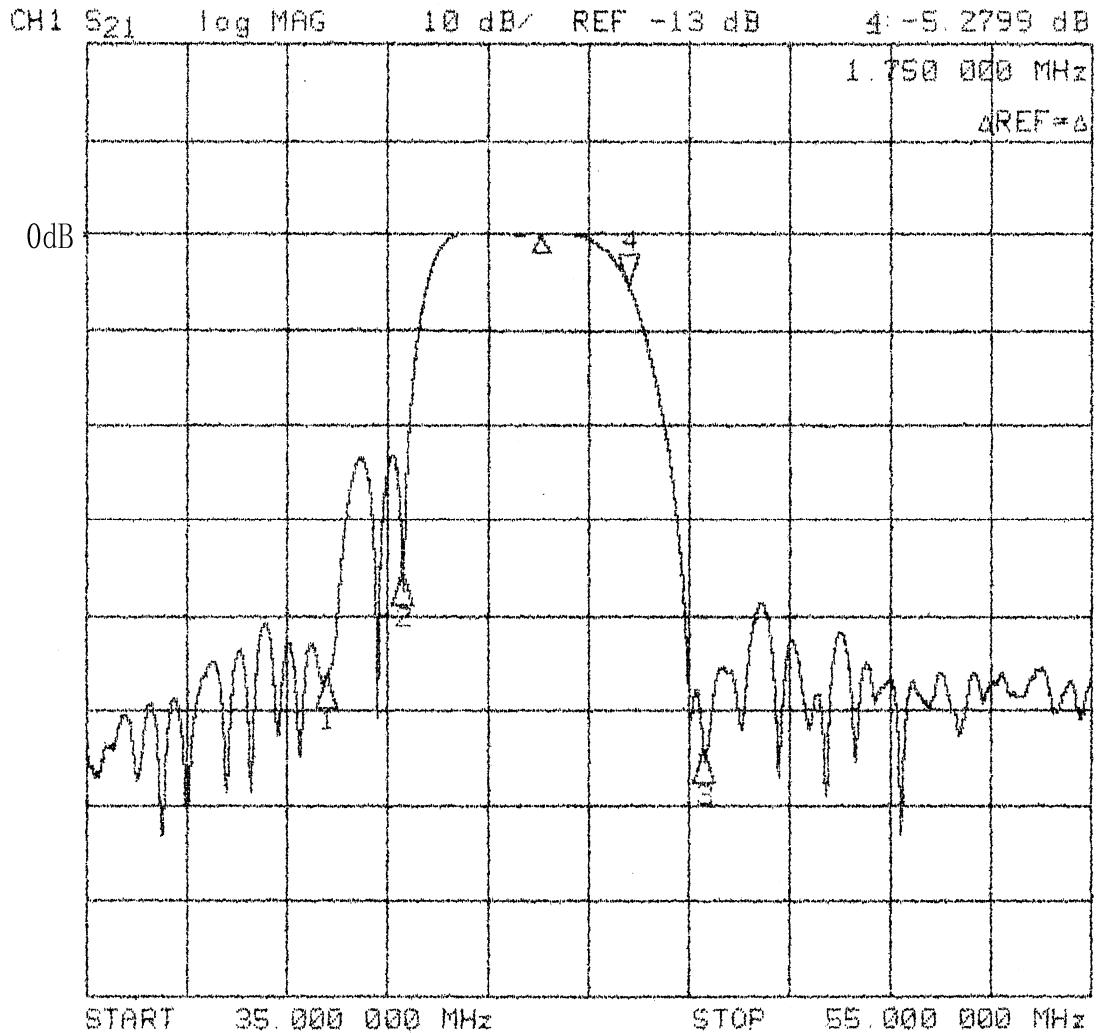
Items	Conditions	Specifications
Vibration	600-3300rpm amplitude 1.5mm 3 directions 2 H each	There shall be no damage.
Drop	On maple plate from 1 m high 3 times	
Lead pull	Pull with 1 kg force for 30 seconds	
Lead bend	90° bending with 500g weigh 2 times	

3.5 Voltage Discharge Test

Item	Condition	Specifications
Surge	Between any two electrode 	There shall be no damage

3.6 Frequency response:

Frequency response of picture channel



Frequency response of sound channel

