

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:	DATE 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



更改历史记录 History Record

更改日期 Date	规格书编号 Spec. No.	产品型号 Part No.	客户产品型号 Customer No.	更改内容描述 Modify Content	备注 Remark



1.SCOPE

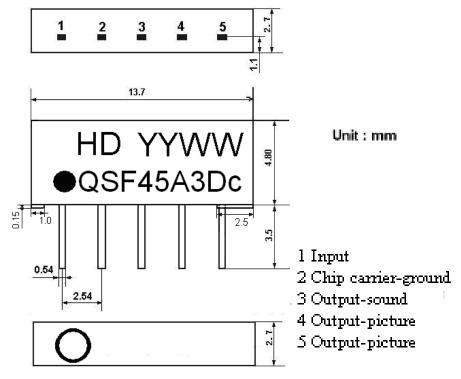
SHOULDER'S SAW filter series have broad line up products meeting all broadcast standard including NTSC,PAL and SECAM systems. These filters are composed of two interdigital transducers on a single-crystal. piezoelectrical chip. they are used in electronic equipments such as TV and so on.

2.Construction

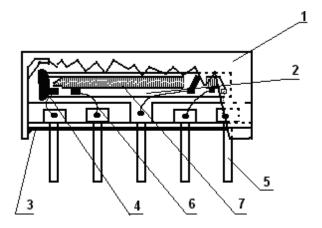
2.1 Dimension and materials

Manufacturer's name: SHOULDER ELECTRONICS LTD

Type: QSF45A3Dc

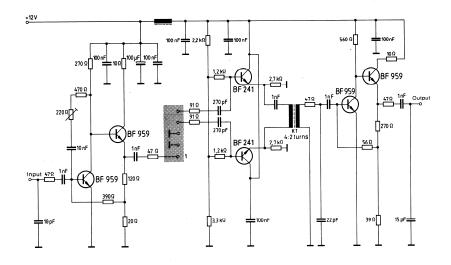


YY:year WW:week



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

2.2. Circuit construction, measurement circuit



Test circuit for SIP-5 filter Input impedance of the symmetrical post-amplifier: 2 k $\!\Omega$ in parallel with 3 pF

3. Characteristics

Items	Conditions	Specifications
Standard atmospheric conditions	Unless otherwise specified, the standard rang of atmospheric conditions for making measurements and tests is as follows; Ambient temperature : 15°C to 35°C Relative humidity : 25% to 85% Air pressure : 86kPa to 106kPa	
Operating temperature rang	Operating temperature rang is the rang of ambient temperatures in which the filter can be operated continuously. $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$	There shall be no damage.
Storage temperature rang	Storage temperature rang is the rang of ambient temperatures at which the filter can be stored without damage. Conditions are as specified elsewhere in these specifications. $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$	
Reference temperature	+25°C	



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 $Zs=50 \Omega$

Load impedance $Z_L=2k \Omega //3pF$ $T_A=25 ^{\circ}C$

a impedance		Z _L -2R //3p.			1 A-20	
Iten	1	Freq	min	typ	max	
Insertion attenuation Reference level		44.06MHz	11.0	13.0	15.0	dB
		45.81MHz	4.7	6.2	7.7	dB
		42.23MHz	-1.0	0.5	2.0	dB
Relative att	enuation	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
Sidelobe	47.31~	55.06MHz	34.0	40.0		dB
Reflected wave signal suppression						
1.2 us 6	5.0 us after i	main pulse	40.0	52.0		dB
(tes	st pulse 250	ns,				uБ
carrier fr	equency 44.	06 MHz)				
Feedthrou	gh signal sı	uppression				
1.2 us o	5.0 us after i	main pulse	45.0	55.0		dB
(tes	(test pulse 250 ns,		45.0	33.0		uБ
carrier frequency 44.06 MHz)						
Group delay ripple (p-p)		-	50	-	ns	
Tempo	erature coef	ficient		-72		ppm/k



Characteristics of sound channel

Source impedance $Zs=50 \Omega$

Load impedance $Z_L=2k\,\Omega\,//3pF$ $T_A=25\,^{\circ}C$

		Freq	min	typ	max	
Insertion att		41.31MHz	-	16.9	1	dB
	Relative attenuation		15.0	30.0	1	dB
Polotivo ett			32.0	41.0	1	dB
Relative att			27.0	45.0	1	dB
			33.0	42.0	1	dB
Sidelobe	35.06~		30.0	40.0		dB
Sidelobe	47.31~	47.31~55.06MHz		38.0		dB
Temperature coefficient			-72		ppm/K	

3.3 Environmental Performance Characteristics

Item		Conditio	on		Specifications
High temperature	80±2℃ standard	for 96±4h. Then it atmospheric cond	eted to after		
Low temperature	The spe -20±3°C standard	cimen shall be store for 96±4h. Then it atmospheric conductations at the store of t	ure of eted to after		
Humidity	40±2°C for 96= atmosph	cimen shall be store with relative humic 44h. Then it shall be teric conditions for ment shall be made	96% andard	Mechanical characteristics and	
Thermal shock	cycles e subjecte	cimen shall be subjected as shown below to standard atmoser which measuren	specifications in electrical characteristics shall be satisfied. There shall be no		
	1 2 3 4 5 6	Temperature +25 °C=>-40 °C -40 °C -40 °C=>+85 °C +85 °C +85 °C=>+25 °C +25 °C	Duration 0.5h 4h 2h 4h 0.5h 1h		excessive change in appearance.
Resistance to	Reflow	soldering method			



Soldering	Peak: 255 ±5 °C, 220 ±5 °C, 40s	
heat	At electrode temperature of the specimen.	
	Temperature profile of reflow soldering Soldering Soldering Slow cooling (Store at room temperature) Pre-heating 1 to 2 min. 10s 2 min. or more	
	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.	
Solder ability	Immerse the pins melt solder at 260°C+5/-0°C	More then 95% of
	for 5 sec.	total area of the
		pins should be
		covered with solder

3.4 Mechanical Test

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

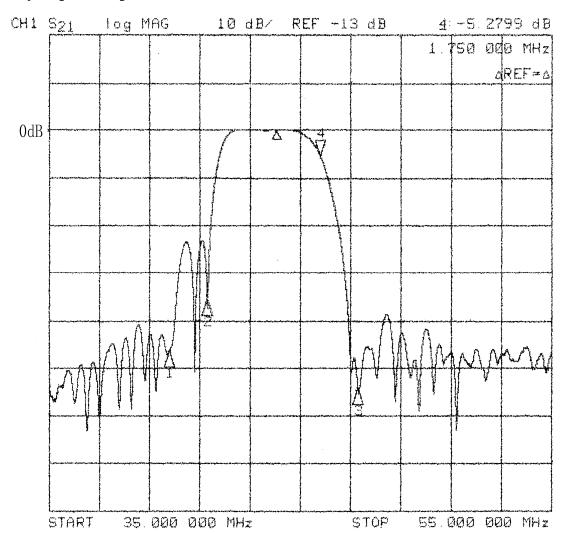


3.5 Voltage Discharge Test

Item	Condition	Specifications
Surge	Between any two electrode	
	100V 1000pF 4Mohm	There shall be no damage

3.6 Frequency response:

Frequency response of picture channel





Frequency response of sound channel

