SHOULDER

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:	HDBF43A7Dc SIP5Dc
PREPARED 编 制:	CHECKED 审 核:
APPROVED 批 准:	DATE日期: 2012-3-6

客户确认 CUSTOMER RE	CEIVED:	
审核 CHECKED	批准 APPROVED	日期 DATE

无锡市好达电子有限公司 Shoulder Electronics Limited

HDBF43A7Dc SIP5Dc

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

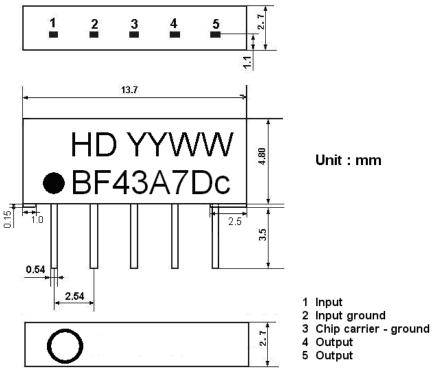
1.SCOPE

SAW FILTER

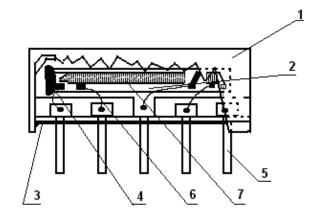
SHOULDER'S SAW filter series have broad line up products meeting all broadcast standard including NTSC,PAL and SECAM systems. These filters are composed of two interdigital transducers on a single-crystal. piezoelectrical chip. they are used in electronic equipments such as TV and so on.

2.Construction

2.1 Dimension and materials Manufacturer's name : SHOULDER ELECTRONICS LTD Type : BF43A7Dc



YY:year WW:week

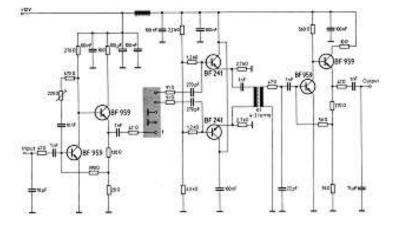


Components	Materials
1.Outer casing	PPS
2.Substrate	Lithium niobate
3.Base	Epoxy resin
4.Absorber	Epoxy resin
5.Lead	Cu alloy+Ni plate+Sn enameled
6.Bonding wire	AlSi alloy
7.Electrode	AI

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Pb free

2.2. Circuit construction, measurement circuit





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 $:15^{\circ}$ C to 35° C Relative humidity $:25\%$ to 85% Air pressure $:86$ kPa to 106 kPa	
Operating temperature rang	Operating temperature rang is the rang of ambient temperatures in which the filter can be operated continuously. -25° C ~ $+65^{\circ}$ 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° C ~ $+85^{\circ}$ C	
Reference	+25°C	
temperature		

3.1 Maximum Rating

DC voltage	VDC	12	V	Between any terminalsBetween any terminals		
AC voltage	Vpp	10	V			
Electrical Char	acteristics					
urce impedance		$Zs=50\Omega$				
ad impedance		$Z_L=2k\Omega$ //3pF	$Z_L=2k\Omega //3pF$		T _A =25°C	
Iter	n	Freq	min	Туре	max	
Center fre	quency	Fo	-	43.75	-	MHz
	Insertion attenuation Reference level		12.8	14.8	16.8	dB
Dagah	and and data	B _{3dB}	-	6.0	-	MHz
Pass da	Pass bandwidth		-	7.6	-	MHz
			-	0.3	-	dB
			-1.3	0.2	1.7	dB
Relative att		40.81MHz	1.1	2.7	4.3	dB
Relative at	enuation	46.81MHz	1.1	2.7	4.3	dB
			38.0	50.0	-	dB
			37.0	48.0	-	dB
	35.06~	39.06MHz	40.0	45.0		dB
Sidelobe	39.06~	39.06~39.81MHz		42.0		dB
Sidelobe	47.81~	47.81~50.06MHz		42.0		dB
	50.06~	50.06~55.06MHz		46.0		dB
Group Delay ripple (pp) (40.75~46.75MHz)			40	50	ns	
Temperature coefficient		ficient		-72	1	ppm/k

3.3 Environmental Performance Characteristics

Item	Condition	Specifications
High	The specimen shall be store at a temperature of	
temperature	85 ± 2 °C for 96±4h. Then it shall be subjected to	
	standard atmospheric conditions for 1h, after	
	which measurement shall be made within 1h.	
Low	The specimen shall be store at a temperature of	Mechanical
temperature	-40 ± 3 °C for 96 ±4 h. Then it shall be subjected to	characteristics and
	standard atmospheric conditions for 1h, after	specifications in
	which measurement shall be made within 1h.	electrical
Humidity	The specimen shall be store at a temperature of	characteristics shall

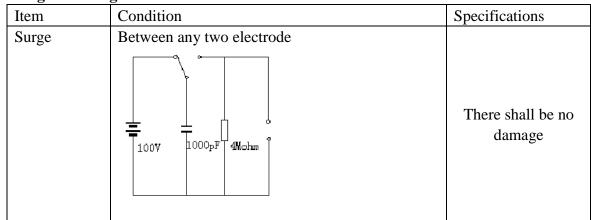
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		1
	40 ± 2 °C with relative humidity of 90% to 96%	be satisfied. There
	for 96±4h. Then it shall be subjected to standard	shall be no
	atmospheric conditions for 1h, after which	excessive change in
	measurement shall be made within 1h.	appearance.
Thermal	The specimen shall be subjected to 8 continuous	
shock	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 °C=>-40 °C 0.5h	
	2 -40 °C 4h	
	$3 -40 \ ^{\circ}C = >+85 \ ^{\circ}C 2h$	
	4 +85 °C 4h	
	5 +85 °C=>+25 °C 0.5h	
	6 +25 °C 1h	
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	
	300-	
	250 Soldering	
	250 200 Pre-heating 00 100 Pre-heating 00 100 100 100 100 100 100 100	
	room temperature)	
	g 150 Pre-heating	
	00.000 / ····	
	50	
	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 $260^{\circ}C+5/-0^{\circ}C$	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



3.6 Frequency response

