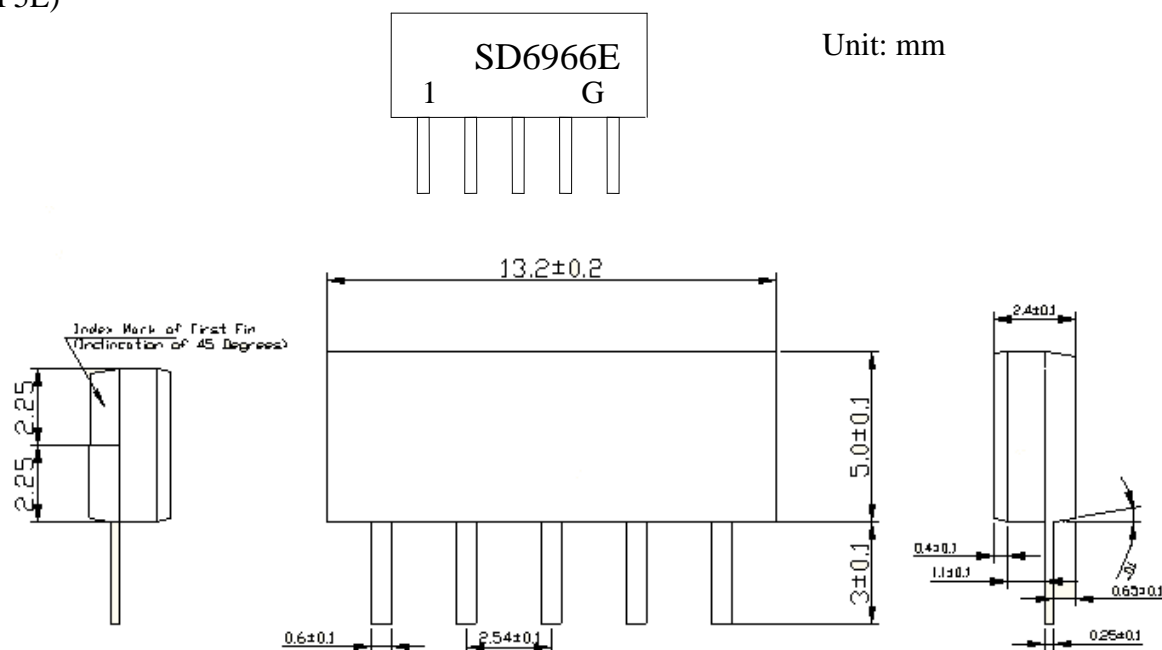


Range:

This specification shall cover the characteristics of SAW filter with Strong's P/N: SD6966E

## 1. Package Dimension

(SIP5E)



Pin No. Functions

1. Input
2. Input
3. Ground
4. Output
5. Output

## 2. Marking

SD6966E . Model  
1 . Pin 1

### 3. Performance

#### 3.1 Use: IF Filter for Band Pass

#### 3.2 MAXIMUM RATINGS

DC voltage	$V_{DC}$	12	V	Between any terminals
AC voltage	$V_{PP}$	10	V	Between any terminals
Operating Temperature Range	$T_A$	-25~65	°C	
Storage Temperature Range	$T_{stg}$	-40~85	°C	

#### 3.3 Electronic Characteristics

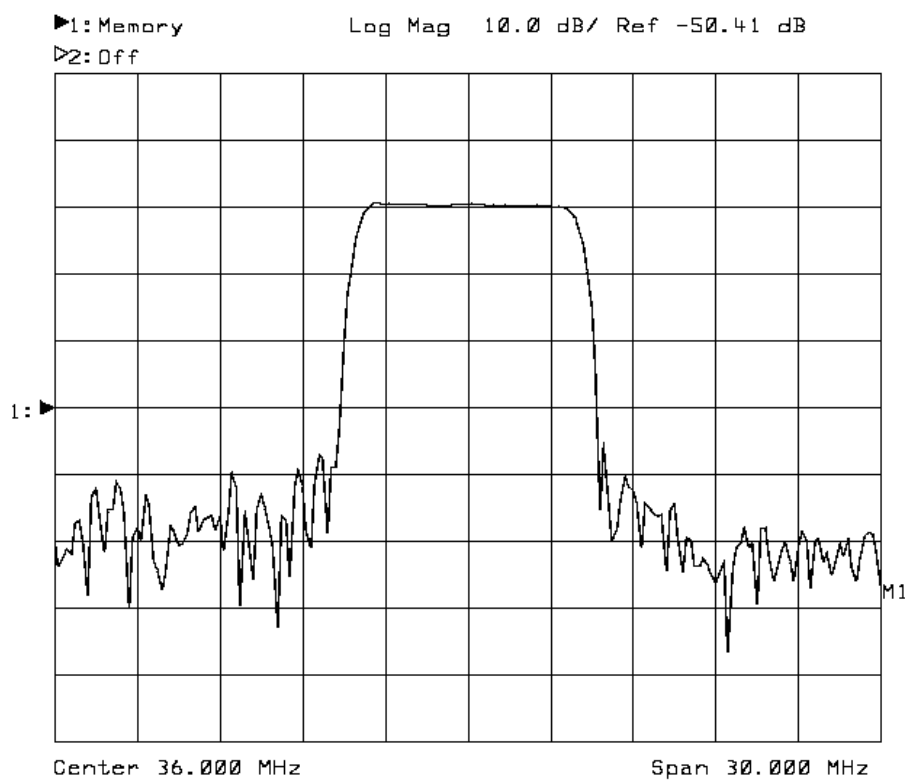
Reference temperature:  $T_a=25(45)^{\circ}\text{C}$

Terminating source impedance  $Z_S=50\ \Omega$

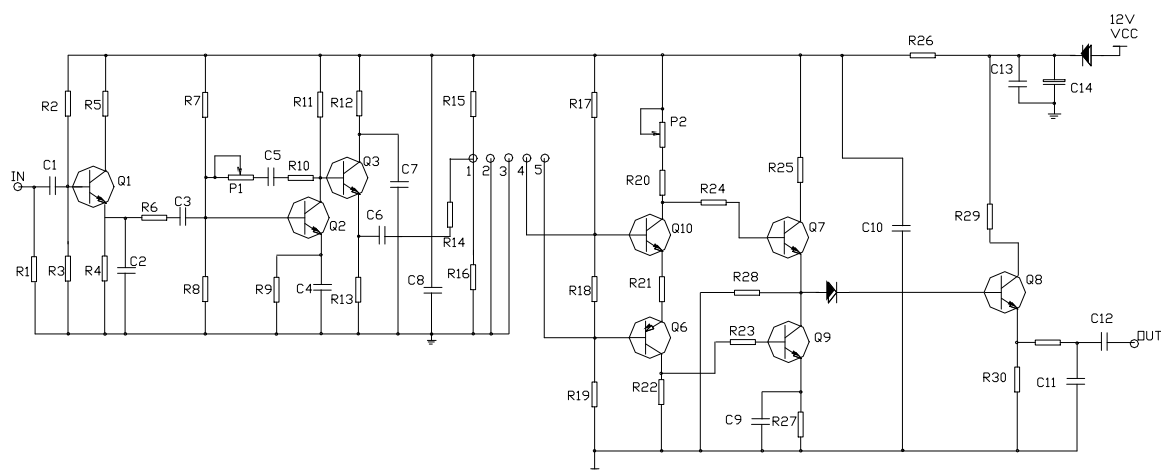
Terminating load impedance  $Z_L=2k\ \Omega // 3P\text{f}$

FREQUENCY(MHz)		VALUE			unit
		Min	Typ.	Max.	
Center frequency		36.00	36.125	36.25	MHz
Insertion attenuation	36.125MHz	18.3	20.3	22.3	dB
Reference Frequency	36.125 MHz		0		
Pass bandwidth	B3dB	-	8.0	-	MHz
Pass bandwidth	B30dB	-	9.4	-	MHz
Relative attenuation	31.25 MHz	35.0	45.0	-	dB
	32.13 MHz	0.9	2.7	4.5	dB
	32.32 MHz	-0.6	0.9	2.4	dB
	39.93 MHz	-0.1	1.4	2.9	dB
	40.13MHz	1.7	3.2	4.7	dB
	47.25 MHz	40.0	52.0	-	dB
Lower sidelobe:	25.00-31.25 MHz	30.0	40.0	-	dB
Upper sidelobe:	40.90- 50.00 MHz	30.0	38.0	-	dB
<b>Amplitude ripple</b>	<b>32.65~39.65MHz</b>	<b>0.0</b>	<b>0.5</b>	<b>1.0</b>	<b>dB</b>
Temperature coefficient	$TC_f$	-	-72	-	ppm/K

### 3.4 Frequency response



### 4. Test Circuit



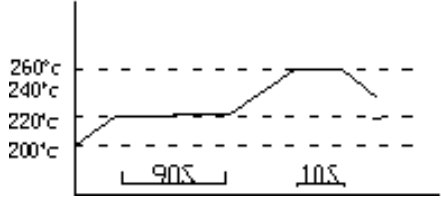
Test Circuit

## 5 ENVIRONMENTAL CHARACTERISTICS

### 5.1 Humidity, temperature Test

ITEM	REQUIREMENT	JUDGEMENT
High temperature storage	$T=+85\pm 2^{\circ}\text{C}$ Duration time 500H Being placed in natural condition for $2\pm .5\text{hours}$	1.No visible damage clear marker 2. Other electric characteristics should be fit for the provided characteristics in the form 3.4 after testing
Low temperature storage	$T= -40\pm 3^{\circ}\text{C}$ Duration time 500H Being placed in nature condition for $2\pm 5\text{hours}$	
High-low temperature cycle	It shall be placed at temperature of $-40^{\circ}\text{C}\pm 3^{\circ}\text{C}$ for 30 minutes, then within 3 minutes replaced at temperature of $+85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 30 minutes, and vice versa. Totally cycle 100 times. It shall be placed in natural condition for $2\pm 0.5$ hours.	
Humidity resistance test	$T=60^{\circ}\text{C}\pm 2^{\circ}\text{C}$ , RH=90~95% Duration time 500H. Being placed in natural condition for $2\pm 0.5$ hours	

### 5.2 Solder-heat Resistance Test

ITEM	REQUIREMENT	JUDGEMENT
Solder-heat Resistance	1.Soldering trough: The 1mm thick PCB fixed with device are immersed in solder trough of $260\pm 5^{\circ}\text{C}$ for $10\pm 1$ seconds. And then it shall be measured after being placed in natural condition for $2\pm 0.5$ hours. 2. Manual soldering with electrical soldering iron: $T=350\pm 10^{\circ}\text{C}$ for 3-4 seconds. And then it shall be measured after being placed in natural condition for $2\pm 0.5\text{hours}$	Same as judgement of 5.1
solderability	Lead terminals are immersed in solder bath of $245\pm 5^{\circ}\text{C}$ for 3-5 seconds.	The solder shall cover at least 80% of the lead terminal
reflow soldering	Repeated 3 times after being on PCB under following condition: 	Same as judgement of 5.1

### 5.3 Mechanical Test

ITEM	REQUIREMENT	JUGEMENT
Vibration Fatigue and terminal Strength test	Force $10 \pm 1$ seconds of 19.6N applied to each terminal in axial direction. Lead terminals shall be folded up to $45^\circ$ with 5N force, then folded back to their axial direction 2 times. It shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55Hz of vibration frequency to each of 3 perpendicular directions for 2 hours.	Same as judgement of 5.1
Drop test	It shall be measured after 10 times random drop from the height of 1 m onto the 20mm thicker hard wood floor.	
Mechanical Shock	The components shall remain within the electrical specifications after 1000 shocks, acceleration $392 \text{ m/s}^2$ , duration 6 milliseconds.	

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