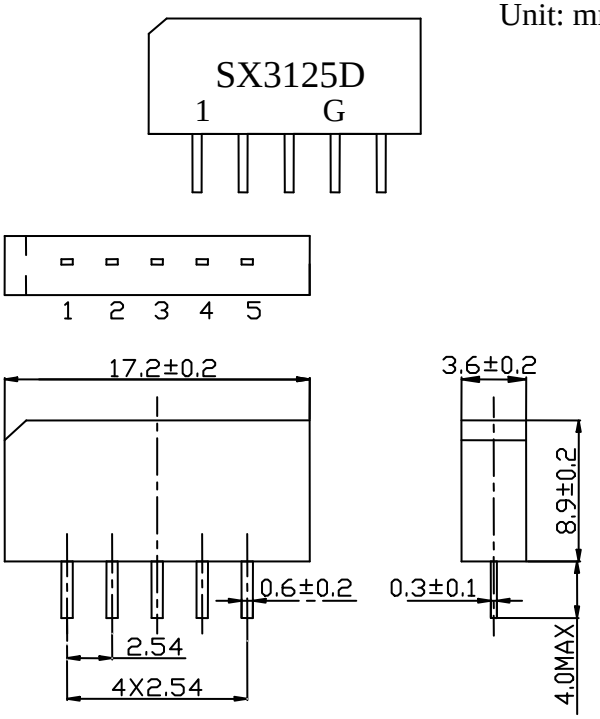
1. Package Dimension

Unit: mm



Pin No.	Functions
1.	Input
2.	Input - ground
3.	Chip carrier - ground
4.	Output
5.	Output

2. Marking

S. Trademark

X3125D. Model

1 . Pin 1

3. Performance

3.1 Part No: SX3125D

3.2 Use: TV IF Filter for digital cable TV

3.3 MAXIMUMRATINGS

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	℃	
Storage Temperature Range	T_{stg}	-40~85	℃	

3.4 Electronic Characteristics

Reference temperature: Ta=25℃

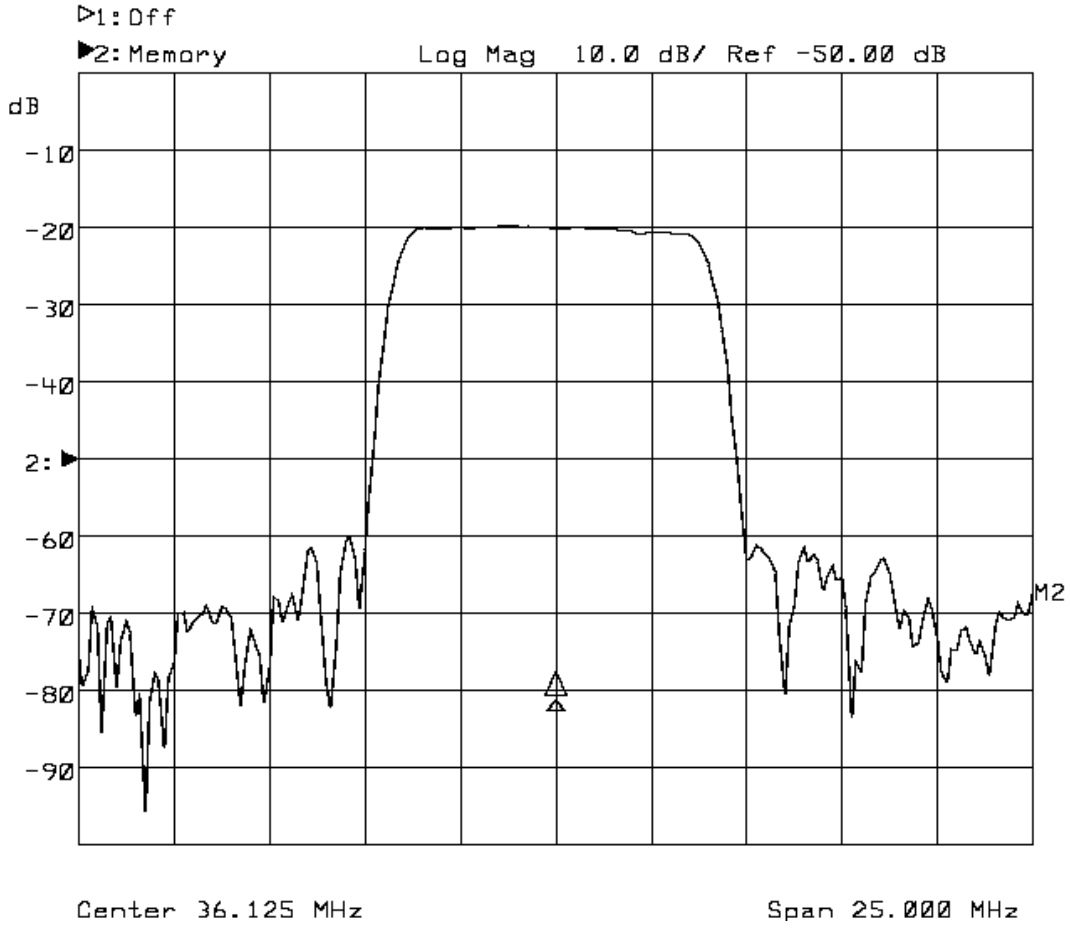
Terminating source impedance Z_S=50Ω

Terminating load impedance Z_L=2kΩ//3 pF

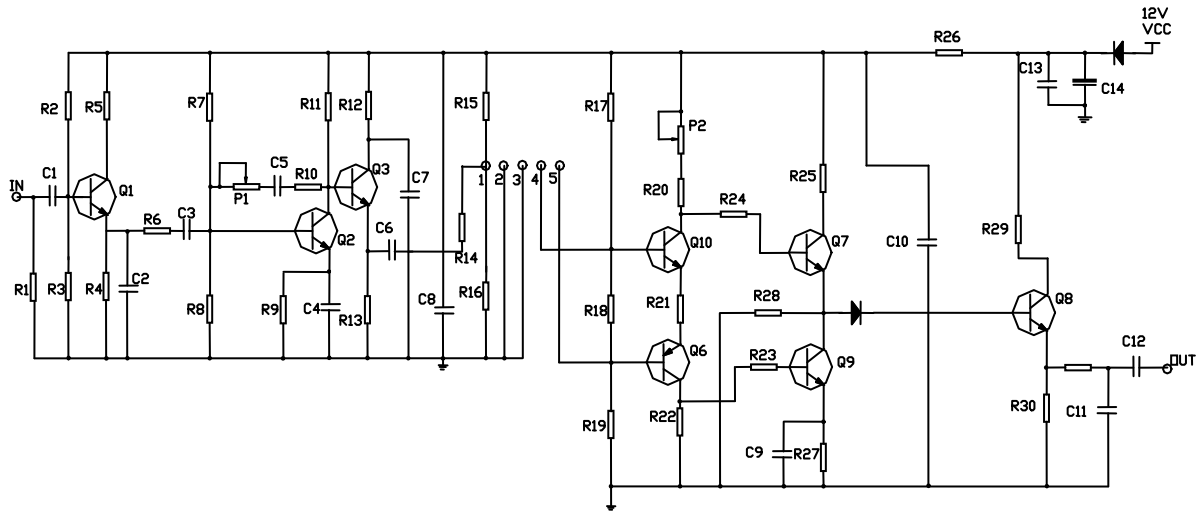
Amplitude Characteristics

FREQUENCY(MHz)		VALUE			unit
		Min	Typ.	Max.	
Center frequency		36.00	36.125	36.25	MHz
Insertion attenuation	36.13	19.7	21.7	23.7	dB
Reference Frequency	36.13		0		
Pass bandwith	B_{3dB}	7.8	8.0	8.2	MHz
Pass bandwith	B_{30dB}	9.2	9.5	9.8	MHz
Relative attenuation	32.32	-0.8	1.2	3.2	dB
	39.93	-0.6	1.4	3.4	dB
	32.13	1.2	3.2	5.2	dB
	40.13	1.2	3.2	5.2	dB
	31.25	32	43.0	-	dB
	47.25	40	50.0	-	dB
Lower sidelobe:	25.00-29.50	36.0	43.0	-	dB
	29.50-31.25	32.0	39.0	-	dB
Upper sidelobe:	41.00- 44.00	31.0	38.0	-	dB
	44.00- 50.00	36.0	44.0	-	dB
Reflected wave signal suppression		40.0	52.0	-	dB
Feedthrough signal suppression		48.0	56.0	-	dB
Group delay ripple (p-p)	32.13 – 40.13	-	40	-	ns
Impedance at 36.13 MHz Input: Zin = Rin // Cin Output : Zout = Rout // Cout		3.6 // 13.0 2.9 // 3.9			KΩ // pF KΩ // pF
Temperature coefficient	TC_f	-	-72	-	ppm/K

3.5 Frequency Characteristics



4. Test Circuit



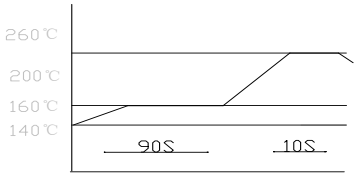
Test Circuit

5 ENVIRONMENTAL CHARACTERISTICS

5.1 Humidity, temperature Test

ITEM	REQUIREMENT	JUDGEMENT
High temperature storage	T=+85±2℃ Duration time 500H Being placed in natural condition for 2±.5hours	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±3℃ Duration time 500H Being placed in nature condition for 2±5hours	
High-low temperature cycle	It shall be placed at temperature of -40℃±3℃ for 30 minutes, then within 3 minutes replaced at temperature of +85℃±2℃ for 30 minutes, and vice versa. Totally cycle 100 times. It shall be placed in natural condition for 2±0.5 hours.	
Humidity resistance test	T=60℃±2℃, RH=90~95% Duration time 500H.Being placed in natural condition for 2± 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±5℃ for 10±1 seconds. And then it shall be measured after being placed in natural condition for2±0.5 hours. 2. Manual soldering with electrical soldering iron: T=350±10℃ for 3-4 seconds. And then it shall be measured after being placed in natural condition for 2±0.5hours	Same as judgement of 5.1
solderability	Lead terminals are immersed in solder bath of 245±5℃ 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±1seconds of 19.6N applied to each terminal in axial direction. Lead terminals shall be folded up to 45° 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 m/s^2, duration 6 milliseconds.	