- ***Ideal for DBS Receivers, IF Filter***
- ***Constant Group Delay***
- ***Improved ESD capability by integrated shunt resistors***
- ***Rugged, Hermetic, Low Profile TO-39 Package***

SF480-4

Absolute Maximum Rating (Ta=25°C)			
Parameter		Rating	Unit
AC Voltage Between Any Two Pins	V_{PP}	5	V
DC Voltage Between Any Two Pins	V_{DC}	0	V
Operating Temperature Range	T_A	-25 ~ +85	°C
Storage Temperature Range	T_{stg}	-40 ~ +85	°C

Electronic Characteristics of Channel 1						
Parameter		Sym	Minimum	Typical	Maximum	Unit
Center Frequency (25°C)	Between 3dB point	f_C	NS	480.00	NS	MHz
	Tolerance from 480.00 MHz	Δf_C	-	-	1.0	MHz
Insertion Attenuation		α	-	21.8	24.0	dB
3dB Bandwidth		BW_3	-	15.0	-	MHz
Relative Attenuation						
	472.00 MHz		-	3.1	5.0	dB
	487.00 MHz	αrel	-	3.0	5.0	dB
Lower Sidelobe	430.00 ... 458.00 MHz		34	45	-	dB
Upper Sidelobe	501.00 ... 530.00 MHz		34	44	-	dB
Reflected Wave Signal Suppression	0.15µs ... 2.0µs after main pulse	-	40.0	46.0	-	dB
Amplitude Ripple (p-p)	475.00 ... 484.00 MHz	$\Delta\alpha$	-	0.6	1.2	dB
Group Delay Ripple (p-p)	472.00 ... 487.00 MHz	$\Delta\tau$	-	10.0	15.0	ns
Temperature Coefficient of Frequency		FTC	-	-86	-	ppm/K

Electronic Characteristics of Channel 2						
Parameter		Sym	Minimum	Typical	Maximum	Unit
Center Frequency (25°C)	Between 3dB point	f_C	NS	480.00	NS	MHz
	Tolerance from 480.00 MHz	Δf_C	-	-	1.0	MHz
Insertion Attenuation		α	-	22.0	24.0	dB
3dB Bandwidth		BW_3	-	27.0	-	MHz
Relative Attenuation						
	466.00 MHz		-	3.1	5.0	dB
	493.00 MHz	αrel	-	2.7	5.0	dB
Lower Sidelobe	430.00 ... 456.00 MHz		34	41.5	-	dB
Upper Sidelobe	503.00 ... 530.00 MHz		34	41.5	-	dB
Reflected Wave Signal Suppression	0.15µs ... 2.0µs after main pulse	-	40.0	44.0	-	dB
Amplitude Ripple (p-p)	475.00 ... 484.00 MHz	$\Delta\alpha$	-	0.6	1.2	dB
Group Delay Ripple (p-p)	466.00 ... 493.00 MHz	$\Delta\tau$	-	8.0	15.0	ns
Temperature Coefficient of Frequency		FTC	-	-86	-	ppm/K

NS = Not Specified

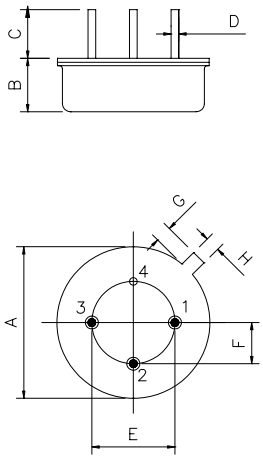
Phone: +86 10 6301 4184 Fax: +86 10 6301 9167 Email: sales@vanlong.com Web: http://www.vanlong.com

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Notes:

1. The frequency f_C is defined as the midpoint between the 3dB frequencies.
2. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture that is connected to a 50Ω test system with VSWR ≤ 1.2:1. The test fixture L and C are adjusted for minimum insertion loss at the filter center frequency, f_C. Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
3. Unless noted otherwise, specifications apply over the entire specified operating temperature range.
4. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
5. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
6. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
7. For questions on technology, prices and delivery please contact our sales offices or e-mail sales@vanlong.com.

Package Dimensions (TO-39-4)



Electrical Connections

Terminals	Connection
1	Input / Output
2	Output 2 / Input 2
3	Output 1 / Input 1
4	Case Ground

Package Dimensions

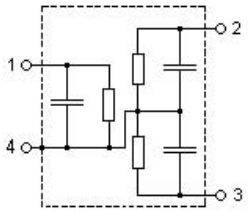
Dimensions	Nom. (mm)	Tol. (mm)
A	9.35	±0.10
B	3.40	±0.10
C	3.00	±0.20
D	0.45	±0.10
E	5.08	±0.10
F	2.54	±0.20
G	1.0	
H	0.6	

Marking



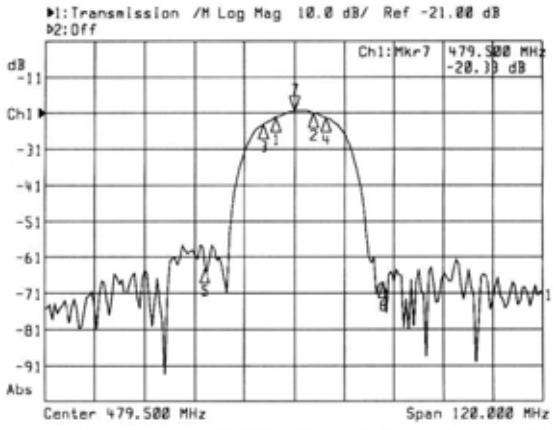
Ink Marking
Color: Black or Blue

Equivalent LC Model



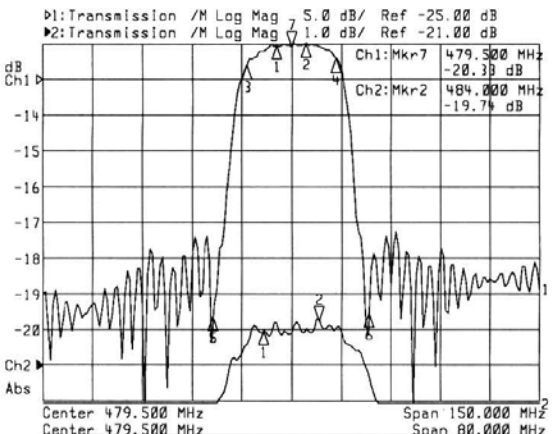
Typical Frequency Response

Channel 1



1:Mkr (MHz)	dB	2:Mkr (MHz)	dB
1: 475.00	-22.22		
2: 484.00	-21.05		
3: 472.00	-24.06		
4: 487.00	-22.28		
5: 458.00	-64.17		
6: 501.00	-60.04		
7> 479.50	-20.33		

Channel 2



1:Mkr (MHz)	dB	2:Mkr (MHz)	dB
1: 475.00	-20.10	1: 475.00	-20.05
2: 484.00	-19.83	2> 484.00	-19.74
3: 466.00	-22.96		
4: 493.00	-22.07		
5: 456.00	-58.18		
6: 503.00	-57.67		
7> 479.50	-20.33		

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