

- **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	α_{rel}	-	3.1	5.0	dB
	487.00 MHz		-	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	0.15 μ s ... 2.0 μ s 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	α_{rel}	-	3.1	5.0	dB
	493.00 MHz		-	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	0.15 μ s ... 2.0 μ s 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

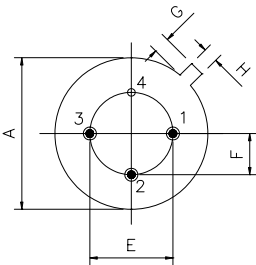
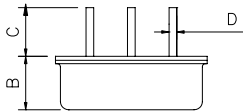
480.00 MHz SAW Filter



Notes:

- The frequency f_c is defined as the midpoint between the 3dB frequencies.
- 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.
- Unless noted otherwise, specifications apply over the entire specified operating temperature range.
- The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
- All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
- 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.
- 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

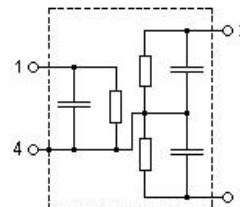
Dimensions	Nom. (mm)	Tol. (mm)
A	9.35	±0.10
B	3.40	±0.10
C	3.00	±0.20
D	0.45	±0.10
E	5.08	±0.10
F	2.54	±0.20
G	1.0	
H	0.6	

Marking



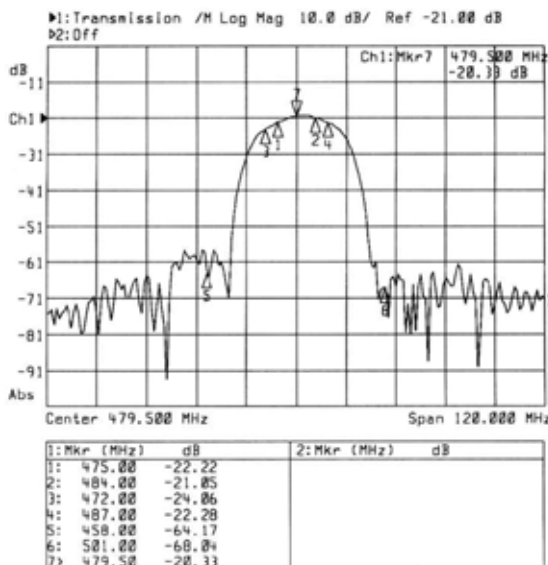
Ink Marking
Color: Black or Blue

Equivalent LC Model



Typical Frequency Response

Channel 1



Channel 2

