

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

# SF480-6

Absolute Maximum Rating (Ta=25°C)			
Parameter		Rating	Unit
AC Voltage Between Any Two Pins	$V_{FP}$	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	$\Delta f_c$	-	-	1.0	MHz
Insertion Attenuation		$\alpha$	-	21.5	23.5	dB
3dB Bandwidth		$BW_3$	-	8.0	-	MHz
Relative Attenuation	476.00 MHz	$\alpha_{rel}$	-	3.0	5.4	dB
	484.00 MHz		-	2.6	5.3	dB
	Lower Sidelobe 410.00 ... 465.00 MHz		37	45	-	dB
	Upper Sidelobe 491.50 ... 499.00 MHz		34	41	-	dB
	499.00 ... 550.00 MHz		38	47	-	dB
Reflected Wave Signal Suppression		-	40.0	46.0	-	dB
	0.19µs ... 2.0µs after main pulse					
Amplitude Ripple (p-p)	478.00 ... 482.00 MHz	$\Delta\alpha$	-	0.7	1.5	dB
Group Delay Ripple (p-p)	476.00 ... 484.00 MHz	$\Delta\tau$	-	13.0	18.0	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	$\Delta f_c$	-	-	1.0	MHz
Insertion Attenuation		$\alpha$	-	23.5	25.5	dB
3dB Bandwidth		$BW_3$	-	54.5	-	MHz
Relative Attenuation	452.50 MHz	$\alpha_{rel}$	-	4.0	5.5	dB
	507.50 MHz		-	3.0	5.3	dB
	Lower Sidelobe 410.00 ... 440.00 MHz		37	44	-	dB
	Upper Sidelobe 518.00 ... 550.00 MHz		36	41	-	dB
Reflected Wave Signal Suppression		-	40.0	46.0	-	dB
	0.12µs ... 2.0µs after main pulse					
Amplitude Ripple (p-p)	461.00 ... 499.00 MHz	$\Delta\alpha$	-	0.6	1.2	dB
Group Delay Ripple (p-p)	452.50 ... 507.50 MHz	$\Delta\tau$	-	11.0	18.0	ns
Temperature Coefficient of Frequency		$FTC$	-	-86	-	ppm/K

NS = Not Specified

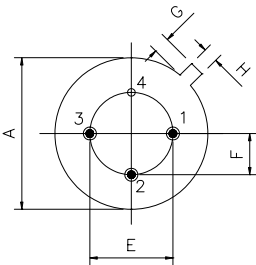
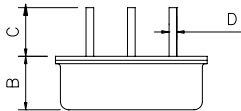
# 480.00 MHz SAW Filter



## 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

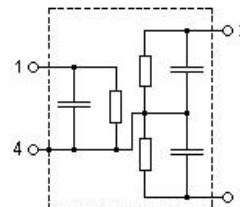
Dimensions	Nom. (mm)	Tol. (mm)
A	9.35	±0.10
B	3.40	±0.10
C	3.00	±0.20
D	0.45	±0.10
E	5.08	±0.10
F	2.54	±0.20
G	1.0	
H	0.6	

## Marking



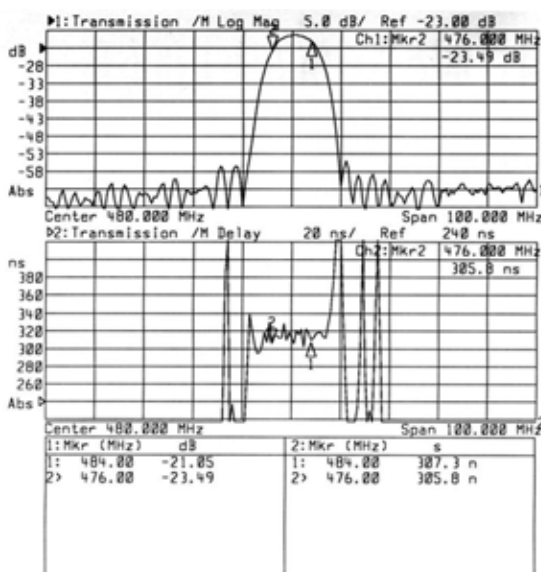
Ink Marking  
Color: Black or Blue

## Equivalent LC Model



## Typical Frequency Response

Channel 1



Channel 2

