

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

# SF480-2

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	$\Delta f_C$	-	-	1.0	MHz
Insertion Attenuation		$\alpha$	-	21.0	22.5	dB
3dB Bandwidth		$BW_3$	-	27	-	MHz
Relative Attenuation	466.00 MHz	$\alpha_{rel}$	-	3.3	4.5	dB
	493.00 MHz		-	2.5	4.5	dB
Lower Sidelobe	430.00 ... 452.00 MHz		32	38	-	dB
Upper Sidelobe	507.00 ... 530.00 MHz		30	36	-	dB
Reflected Wave Signal Suppression	0.13µs ... 2.0µs after main pulse	-	40.0	49.0	-	dB
Amplitude Ripple (p-p)	471.00 ... 488.00 MHz	$\Delta\alpha$	-	0.6	1.2	dB
Group Delay Ripple (p-p)	466.00 ... 493.00 MHz	$\Delta\tau$	-	11.0	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		$\alpha$	-	21.0	22.5	dB
3dB Bandwidth		$BW_3$	-	18	-	MHz
Relative Attenuation	475.50 MHz	$\alpha_{rel}$	-	3.5	4.5	dB
	488.50 MHz		-	2.3	4.5	dB
Lower Sidelobe	430.00 ... 457.50 MHz		32	38	-	dB
Upper Sidelobe	500.50 ... 530.00 MHz		30	36	-	dB
Reflected Wave Signal Suppression	0.13µs ... 2.0µs after main pulse	-	40.0	44.0	-	dB
Amplitude Ripple (p-p)	476.00 ... 483.00 MHz	$\Delta\alpha$	-	0.6	1.2	dB
Group Delay Ripple (p-p)	470.50 ... 488.50 MHz	$\Delta\tau$	-	11.0	18.0	ns
Temperature Coefficient of Frequency		$FTC$	-	-86	-	ppm/K

NS = Not Specified

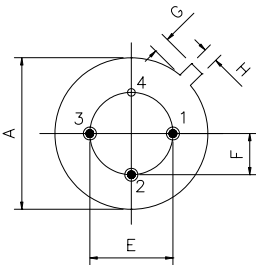
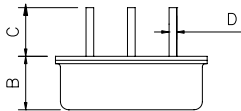
# 480.00 MHz SAW Filter



## Notes:

- 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

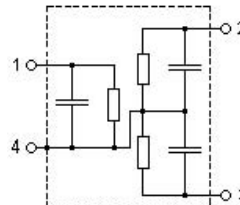
Dimensions	Nom. (mm)	Tol. (mm)
A	9.35	±0.10
B	3.40	±0.10
C	3.00	±0.20
D	0.45	±0.10
E	5.08	±0.10
F	2.54	±0.20
G	1.0	
H	0.6	

## Marking



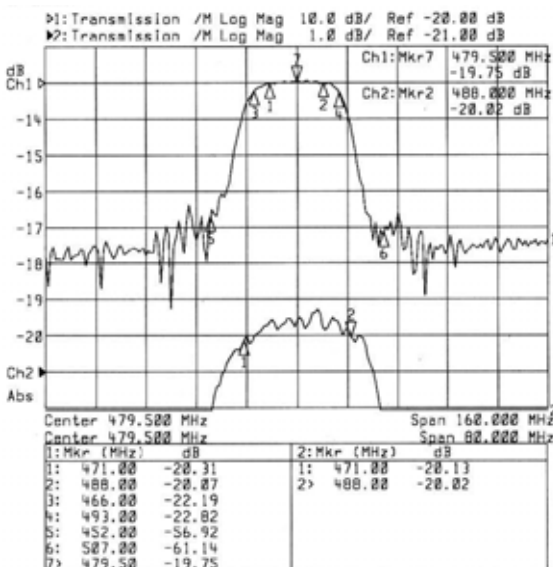
Ink Marking  
Color: Black or Blue

## Equivalent LC Model



## Typical Frequency Response

Channel 1



Channel 2

