

- **Ideal for DBS Receivers, IF Filter**
- **Constant Group Delay**
- **Improved ESD capability by integrated shunt resistors**
- **Rugged, Hermetic, Low Profile TO-39 Package**
- **Complies with Directive 2002/95/EC (RoHS Compliant)**

# SF480-1

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

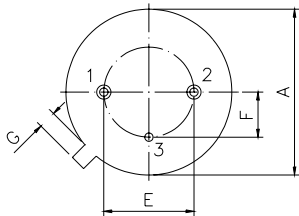
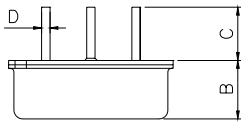
Electronic Characteristics						
Parameter		Sym	Minimum	Typical	Maximum	Unit
Center Frequency (25°C)	Between 3dB point	$f_c$	NS	480.00	NS	MHz
	Tolerance from 480.00 MHz	$\Delta f_c$	-	-	1.0	MHz
Insertion Attenuation		$\alpha$	-	21.0	23.0	dB
3dB Bandwidth		$BW_3$	16.60	17.80	18.60	MHz
Relative Attenuation	471.00 MHz	$\alpha_{rel}$	-	3.4	5.4	dB
	489.00 MHz		-	3.0	5.4	dB
	Lower Sidelobe 430.00 ... 461.00 MHz		38	50	-	dB
	Upper Sidelobe 499.00 ... 530.00 MHz		38	45	-	dB
Reflected Wave Signal Suppression	0.1µs ... 2.0µs after main pulse	-	40.0	46.0	-	dB
Amplitude Ripple (p-p)	476.00 ... 484.00 MHz	$\Delta\alpha$	-	0.6	1.0	dB
Group Delay	480.00 MHz	$\tau$	-	281.0	-	ns
Group Delay Ripple (p-p)	471.50 ... 488.50 MHz	$\Delta\tau$	-	11.5	18.0	ns
Temperature Coefficient of Frequency		$FTC$	-	-94	-	ppm/K

NS = Not Specified

**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)



Electrical Connections

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

Package Dimensions

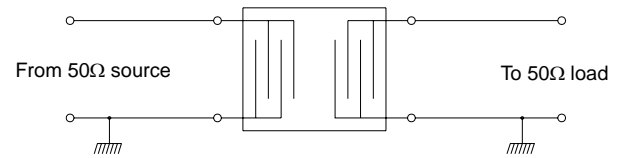
Dimensions	Nom. (mm)	Tol. (mm)
A	9.35	±0.10
B	3.40	±0.10
C	3.00	±0.20
D	0.45	±0.10
E	5.08	±0.10
F	2.54	±0.20
G	0.45	

Marking



Ink Marking  
Color: Black or Blue

Test Circuit



Typical Frequency Response

