

- **Ideal for DSB Wireless Receivers**
- **Constant Group Delay**
- **Two Channels Available**
- **Rugged, Hermetic, Low Profile TO-39 Package**

SF480-4

Absolute Maximum Rating (Ta=25°C)		
Parameter	Rating	Unit
DC Voltage V _{DC}	0	V
AC Voltage V _{pp}	5 (50Hz/60Hz)	V
Operating Temperature Range	-20 ~ +80	°C
Storage Temperature Range	-40 ~ +85	°C

Specifications of Channel 1						
Parameter		Sym	Minimum	Typical	Maximum	Unit
Frequency (25°C)	Nominal Frequency	f _c	NS	479.500	NS	MHz
	Tolerance from 479.500 MHz	Δf _c	-	±1.0	-	MHz
Insertion Loss		IL	-	21.8	24.0	dB
3dB Bandwidth		BW ₃	-	15.0	-	MHz
Relative Attention	472.0 MHz	-	-	3.0	5.0	dB
	487.0 MHz	-	-	3.1	5.0	dB
Lower Sidelobe		-	34.0	45.0	-	dB
Upper Sidelobe		-	34.0	44.0	-	dB
Reflected Wave Signal Suppression 0.15μs ~ 2.0μs after Main Pulse		-	40.0	46.0	-	dB
Amplitude Ripple		-	-	0.3	0.6	dB
Group Delay Ripple		-	-	11.0	15.0	ns
Impedance at 479.5 MHz	Input Z _{in} = R _{in} C _{in}	-	-	180 3.8	-	Ω pF
	Output Z _{out} = R _{out} C _{out}	-	-	140 3.3	-	Ω pF
Temperature Coefficient of Frequency		FTC	-	-86	-	ppm/K

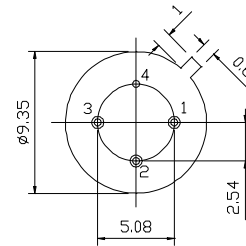
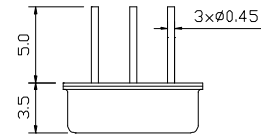
Specifications of Channel 2						
Parameter		Sym	Minimum	Typical	Maximum	Unit
Frequency (25°C)	Nominal Frequency	f _c	NS	479.500	NS	MHz
	Tolerance from 479.50 MHz	Δf _c	-	±1.0	-	MHz
Insertion Loss		IL	-	22.0	24.0	dB
3dB Bandwidth		BW ₃	-	27.0	-	MHz
Relative Attention	466.0 MHz	-	-	4.0	5.5	dB
	495.0MHz	-	-	3.0	5.3	dB
Lower Sidelobe		-	34.0	41.5	-	dB
Upper Sidelobe		-	34.0	41.5	-	dB
Reflected Wave Signal Suppression 0.15μs ~ 3.0μs after Main Pulse		-	40.0	44.0	-	dB
Amplitude Ripple		-	-	0.3	0.7	dB
Group Delay Ripple		-	-	8.0	15.0	ns
Impedance at 479.5 MHz Output Z _{out} = R _{out} C _{out}		-	-	220 4.2	-	Ω pF
Temperature Coefficient of Frequency		FTC	-	-86	-	ppm/K

NS = Not Specified

Notes

1. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture, which is connected to a 50 Ω test system ($VSWR \leq 1.2:1$). The test fixture's L and C are adjusted for minimum insertion loss at the filter center frequency. f_c Note the insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality. The optimum impedance matching component values are dependent on circuit parasitic losses.
2. The frequency f_c is defined as the midpoint between the 3dB frequency.
3. Unless notes otherwise, specifications apply over the entire specified operating temperature range.
4. The design, manufacturing process, and specifications of this device are subject to change without notice.
5. The turnover temperature, T_o is the temperature of maximum (or turnover) frequency, f_c the nominal frequency at any case temperature, T_c , may be calculated from : $f = f_c [1 - FTC(T_o - T_c)^2]$.

Package Outline (TO-39-4)



Pin	Connection
1	Input
2	Output Channel 2
3	Output Channel 1
4	Ground

All dimensions are in mm