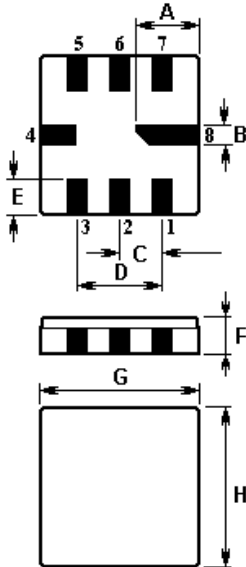


The ACTF4014/480.0/QCC8C is an IF filter for DBS receivers with constant group delay. The device is housed in a QCC8C package. Centre frequency ; 480.0MHz.

### 1.Package Dimension (QCC8C)

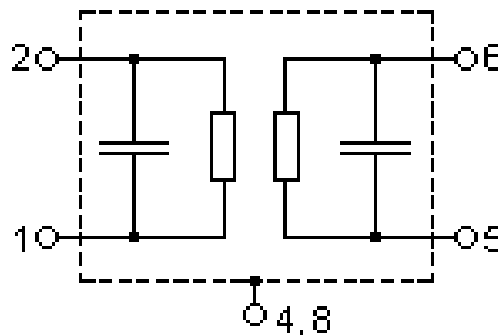


### 2.

Pin	Connection
2	Input
1	Input Ground
6	Output
5	Output Ground
3, 7	To be Grounded
4,8	Case Ground

Sign	Data (unit: mm)	Sign	Data (unit: mm)
A	2.08	E	1.20
B	0.60	F	1.35
C	1.27	G	5.00
D	2.54	H	5.00

### 3.Equivalent LC Model



In keeping with our ongoing policy of product evolution and improvement, the above specification is subject to change without notice.

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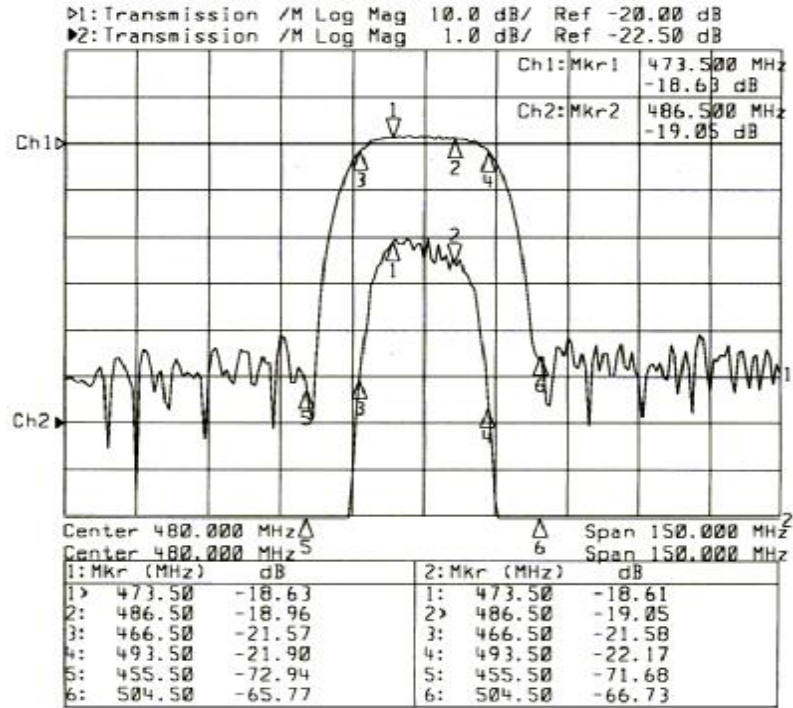
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Date : SEPT 04

3 The Business Centre, Molly Millars Lane, Wokingham, Berks, RG41 2EY, UK

<http://www.actcrystals.com>

#### 4. Typical Frequency Response



#### 5. Performance

##### 5-1. Maximum Ratings

Rating		Value	Unit
AC Voltage Between Any Two Pins	$V_{pp}$	5	V
DC Voltage Between Any Two Pins	$V_{DC}$	0	V
Storage temperature range	$T_{stg}$	-40 to +85	°C
Operable temperature range	$T_A$	-25 to +85	°C

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### 5-2. Electronic Characteristics

Reference temperature:  $T_A = 25\text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$   
 Group delay aperture: 0.25MHz

Characteristic	Min.	Typical	Max.	Unit
<b>Centre Frequency</b> $f_c$	479.00	480.00	481.00	MHz
<b>Insertion attenuation</b> 480.00 MHz $\alpha$ (Reference level for the following data)	--	22.5	24	dB
<b>Pass bandwidth</b> $\alpha_{rel} \leq 3\text{dB}$ $B_{3\text{dB}}$	25.6	26.6	27.6	MHz
<b>Relative attenuation</b> $\alpha_{rel}$				
466.50 MHz	--	3.0	4.6	dB
493.50 MHz	--	3.2	4.6	dB
Lower sidelobe 430.00 ... 455.50 MHz	40.0	46.0	--	dB
Upper sidelobe 504.50 ... 530.00 MHz	38.0	43.0	--	dB
<b>Reflected wave signal suppression</b> 0.15 $\mu\text{s}$ ... 2.0 $\mu\text{s}$ after main pulse	40.0	46.0	--	dB
<b>Amplitude ripple (p-p)</b> 473.50 ... 486.50 MHz $\Delta \alpha$	--	0.6	1.0	dB
<b>Group delay</b> 480.00 MHz $t$	--	227.5	--	ns
<b>Group delay ripple (p-p)</b> 467.00 ... 493.00 MHz $\Delta t$	--	8.5	15	ns
<b>Temperature coefficient of frequency</b> $TC_f$	--	-86	--	ppm/K

### ⓘ CAUTION: Electrostatic Sensitive Device. Observe precautions for handling!

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 50 $\Omega$  test system with VSWR $\leq$ 1.2:1. The test fixture L and C are adjusted for minimum insertion loss at the filter centre 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.

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