

# XCBC0822A

## 380-960 vs 1710-2690 MHz Cross-Band Combiner

### Features

- High-power handling in small size
- Low Insertion Loss and Ripple
- Wide passband response. Low Pass and High Pass in one

### Applications

- Wireless Infrastructure applications
- Usable in systems with 2 bands of up to 6 W/band or 4 bands of up to 3 W/band.



Part Dimensions: 10.2 × 5.1 × 1.8 mm • 0.2 g

### Description

Surface mount wide band diplexer valued for combining <1GHz bands with >1.7GHz bands to share an antenna or common signal path.

### Electrical Specifications

Parameter	Frequency (MHz)	Typical at 25°C	Spec. at 25°C	Spec. over -40°C to +85°C
Nominal Impedance	-	50 ohms	-	-
Average Input Power per port	-	-	-	6.0 Watt max
Peak Input Power per port	-	-	-	60 Watt max
Average Combined Output Power	-	-	-	12.0 Watt max
Peak Combined Output Power	-	-	-	120 Watt max

#### Low-band to Antenna Response

Passband Insertion Loss (5 MHz avg)	380 - 960	0.3 dB	0.5 dB max	0.5 dB max
Passband Return Loss	380 - 960	18 dB	16 dB min	16 dB min
Attenuation:	1710 - 2180	21 dB	20 dB min	20 dB min
	2180 - 2690	20 dB	17 dB min	17 dB min

#### High-band to Antenna Response

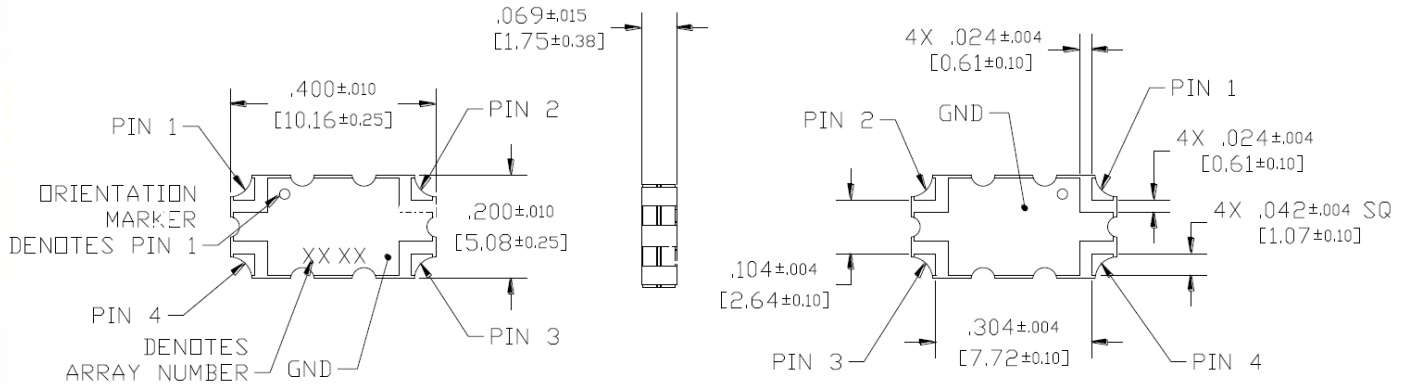
Passband Insertion Loss (5 MHz avg)	1710 - 2690	0.3 dB	0.5 dB max	0.5 dB max
Passband Return Loss:	1710 - 2180	18 dB	16 dB min	16 dB min
	2180 - 2690	15 dB	13 dB min	13 dB min
Attenuation:	698 - 960	21 dB	20 dB min	20 dB min
	380 - 698	20 dB	17 dB min	17 dB min

Note: CTS tests each unit to the critical specifications above. Subsequent audits may deviate due to repeatability among different test systems which shall not exceed these allowances.

#### Specification Allowance

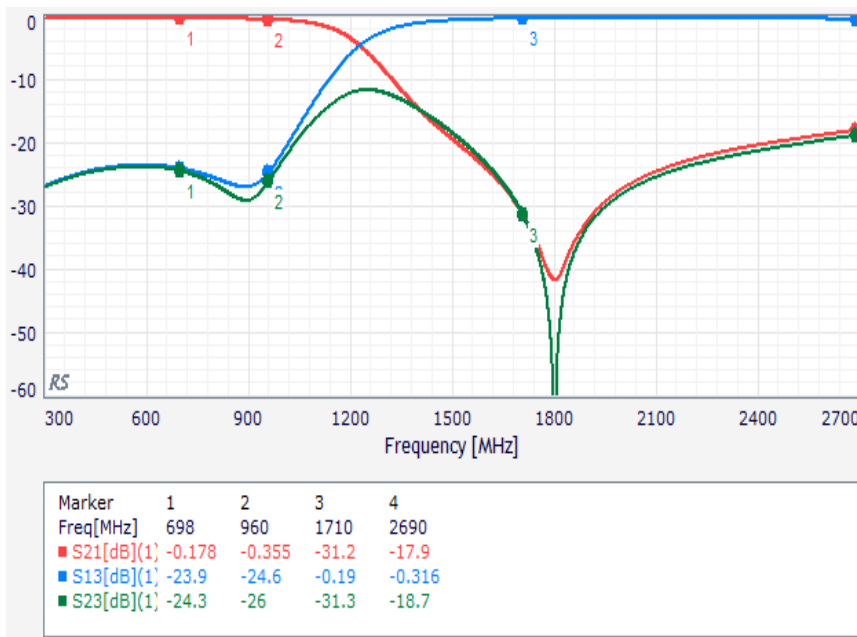
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB

### Mechanical Drawing

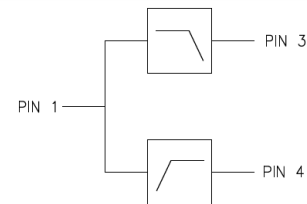


Unit in inch [mm]

### Electrical Response



### Pin Assignments And PCB Layout



Pin 1	Pin 2	Pin 3	Pin 4
Common Port	GND	Low Pass Port	High Pass Port

To ensure proper electrical and thermal performance there must be a ground plane with 100% solder connection underneath the part orientated as shown with text facing up.

