

CER1057A - PRELIMINARY

Band 30 Femto-Cell Duplexer

Features

- Low Loss with High Rejection
- Superior power handling and reliability

Applications

- Wireless Infrastructure applications including high-performance carrier-grade femto-cells.



Part Dimensions: 24.1 × 6.1 × 4.6 mm • 3.0 g
Materials: Ag plated ceramic block with tin plated brass shield

Description

Surface mount ceramic duplexer supports a universal footprint across all FDD frequency bands enabling the use of a common system PCB. Provides superior rejection, insertion loss, reliability, as well as both peak and average power handling compared to other duplexer technologies.

Electrical Specifications (These specs are NOT guaranteed. Will be revised following prototype run.)

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	-	-	-	3.0 Watt max
Peak Input Power	-	-	-	20 Watt max

Antenna to UL Response

Passband Insertion Loss (5 MHz avg)	2305-2315	2.0-2.5 dB	2.3-2.8 dB max	2.5-3.0 dB max
Passband Return Loss	2305-2315	13-15 dB	10-12 dB min	10-12 dB min
Attenuation:	2350-2360	47-50 dB	42-45 dB min	42-45 dB min
	2200	17-20 dB	12-15 dB min	12-15 dB min

DL to Antenna Response

Passband Insertion Loss (5 MHz avg)	2350-2360	2.0-2.5 dB	2.3-2.8 dB max	2.5-3.0 dB max
Passband Return Loss	2350-2360	13-15 dB	10-12 dB min	10-12 dB min
Attenuation:	2305-2315	50-53 dB	45-48 dB min	45-48 dB min
(prefer if 2402 MHz)	2496	20-23 dB	15-18 dB min	15-18 dB min

DL to UL Response

Attenuation for UL band	2305-2315	50-53 dB	45-48 dB min	45-48 dB min
Attenuation for DL band	2350-2360	47-50 dB	42-45 dB min	42-45 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

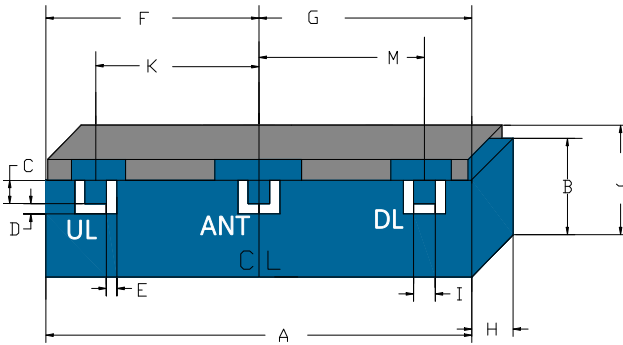
Insertion Loss	0.1 dB
Return Loss	1.0 dB
Attenuation	1.0 dB



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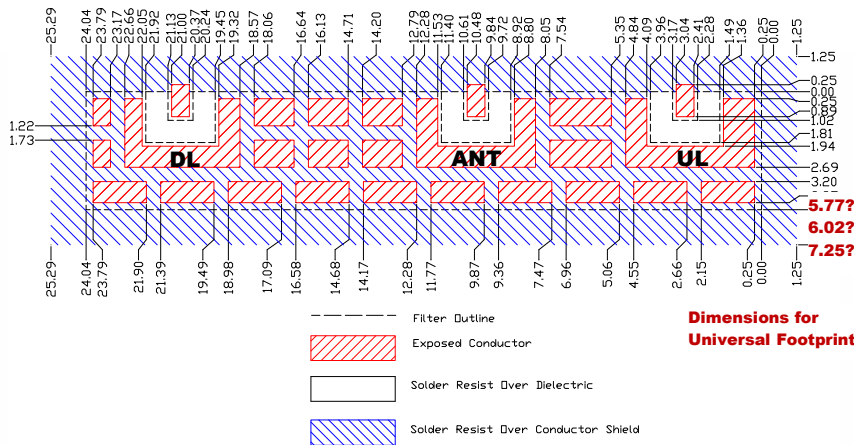
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Mechanical Drawing



Dim.	Nominal (mm)	Tolerance (±mm or Max)
A	24.04	Max
B	5.00?	Max
C	1.02	0.13
D	0.79	0.13
E	0.79	0.13
F	10.16	0.13
G	13.88	0.13
H	4.60	Max
I	0.89	0.13
J	6.10?	Max
K	7.44	0.13
M	10.52	0.13

PCB Layout



IMPORTANT: Please assure ≥ 20 mils (0.5mm) thickness of dielectric beneath the I/O Pads and the surrounding clearance zone down to the required ground plane.

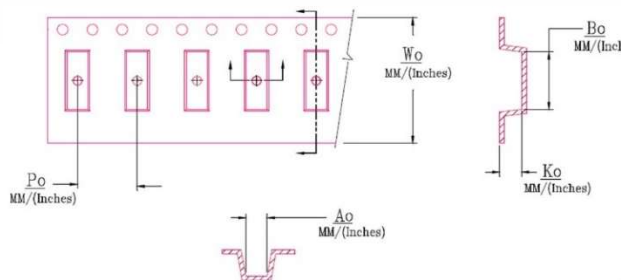
Please assure sufficient ground vias between the top metal ground plane and the primary ground plane.

Recommended solder: 6 mils of SAC305 with reflow including 120s of soak at 217°C, and up to 30 sec peak at 241°C.

Packaging and Marking

Dimension	Units	Spec.	Product Marking
Reel Diameter	mm	330	CTS
Reel Weight	kg	2.3	057
Reel Quantity	ea.	500	YWW

Customer Feed Direction → → →



W_0	A_0	B_0	K_0	P_0
1.732 in 44.0 mm	0.271 in 6.88 mm	0.974 in 24.74 mm	0.195 in 4.95 mm	0.472 in 12.0 mm

Electrical Response