FEATURES:

- Surface Mount/Tape & Reel
- Small .5" x .5" x .1" Size
- Linear Wideband Tuning Range
- Low Cost
- Standard Pad Locations
- -40°C to 85°C Operating Temperature
- 3.3V & 5V parts also available - **Please Contact Champion**

*The **CZM3-1750** is a fundamental mode reflection oscillator that utilizes a silicon bipolar transistor and hyper-abrupt silicon varactor diodes to create a highly linear VCO with wideband tuning characteristics. The device is useful for many wireless applications where high frequency and linear modulation is required.*
The process is very repeatable from unit to unit and assembled in ISO 9001 approved manufacturing facility with the latest surface mount equipment. Every unit is DC and RF tested with our fully automated computerized test stations to provide the highest reliabile product.

ELECTRICAL SPECIFICATIONS

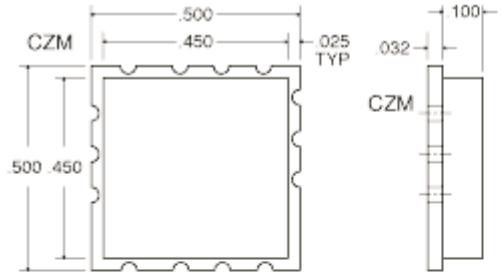
Model	**CZM3-1750**				
Parameter	**Test Condition**	**Units**	**Min**	**Typical**	**Max**
Frequency Range	VC = 0V to 20V	MHz	1350		2200
Tuning Voltage	Vt	V	0		+20
RF Output Power	1350 - 2200MHz	dBm	+8	+11	+13
Supply Voltage	V_{CC}	V		+8	
Supply Current	I_{CC}	mA		+26	+50
Phase Noise	ssb @ 10KHz	dBc/Hz		-90	
Modulation Sensitivity	Vt = 1-12V	MHz/V	48	90	120
Tuning Linearity		ratio		1.5	2.5
Modulation Bandwidth	3dB BW	MHz		5	
Harmonics	2nd	dBC		-15	-8
Frequency Pushing	V_{CC} = 7.75 to 8.25	MHz/V		2.5	
Frequency Pulling	1.5:1 VSWR	MHz			35
Frequency Drift	-40° to 85°C	MHz		4	
Tuning Input Capacitance		pF		27	
Absolute Maximum Ratings					
Supply Voltage		V			+15
Tuning Voltage		V			+22
Storage Temperature		°C	-45		95
Solder Assembly Temperature			230°C for 10 secs.		

PART NUMBERING GUIDE

CZM3-1750-xxx
└► Part Number Assigned by Champion; Based on Customer Requirements

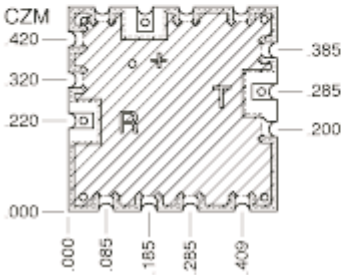
2553 N. Edgington Street, Franklin Park, IL 60131 • Phone: 847.451.1000 • Fax: 847.451.7585

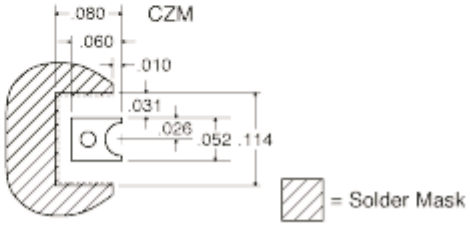
800-888-1499 or www.champtech.com



CZM PIN	Function
1	RF OUT (R)
2	Vcc (+)
3	Vt (T)

Tolerances: .XXX = ±.010





Notes:

- Exceeding Limits may cause permanent damage.
- A series dropping resistor will allow operation at higher voltage
- External bypassing of both Vcc and Vt can improve phase noise performance and power supply decoupling.
- *Specifications subject to change without notice.*

MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

TEST METHODS	REFERENCE PROCEDURES	DESCRIPTION
Temperature Cycle	MIL-STD-833, Mtd 1010, Cond. B	-55°C to +125°C; Air-to-Air; 100 cycles; 10 min. dwell
Mechanical Shock	MIL-STD-202, Mtd 213, Cond. D	500 g's
Vibration	MIL-STD 202, Mtd 204, Cond. B	10-2000 Hz; 0.06 inch; 15g; 3 planes
Humidity Steady State	MIL-STD-202, Mtd 103	40°C; 90%-95% R.H.; 56 days
Thermal Shock	MIL-STD-883, Mtd 1011.7 Cond. A	100°C to 0°C; Water-to-Water; 15 cycles
Electrostatic Discharge	MIL-STD-883, Mtd 3015 Class II	2 KV to 4 KV Threshold
Solderability	MIL-STD-883, Mtd 2022.2	Solder dip; Meniscograph Criteria
Hermeticity	MIL-STD-883, Mtd 1014.8, Cond. A1	Mass spectro. 2 x 10-8 atmos. CC/sec He
Resistance to Soldering	MIL-STD-202, Mtd 210D, Cond. J	235°C; 30 seconds
Lead Integrity	MIL-STD-883, Mtd 2004.5, Cond. A, B1	Lead tension & bend stress
Marking Permanence	MIL-STD-883, Mtd 2015.8	Resistance to solvents
Life Test	MIL-STD-883, Mtd 1005.6	125°C, powered, 1000 hours minimum