

OCXO (Oven Controlled Crystal Oscillators)**+5.0 V****OC11E5A; OC11E5S Series****50 Ω Load Sine Wave****MERCURY**
Since 1973

Mercury OC11E is 25.4x25.4 mm 5 pin solder sealed metal package with 19.0x19.0 mm pin-to-pin spacing high stability low aging OCXO. Besides standard AT cut crystal, users can also choose SC cut crystal for better performance. HCMOS square wave output is available as OC11T series.

**General Specifications**

Output Wave Form			Sine wave. Wave form code is “E”			
Frequency Range			4.0 MHz ~100.0 MHz			
Type of Crystal Cut Used			AT-cut. Use “A” for crystal code or SC-cut: use “S” for crystal code. Please refer to technical note TN031 for SC and AT-cut crystal comparison			
Supply Voltage (Vcc)			+5.0 V _{D.C} ±5% (voltage code is “5”)			
Initial Calibration Tolerance			±0.05 ppm max. at time of shipment; Vcon= +2.5V			
Frequency Stability vs	Operating Temperature Range (custom spec. on request)		AT-cut crystal		SC-cut crystal	
			±0.03 ppm over -20°C to +70°C		±0.01 ppm over -20°C to +70°C	
			±0.05 ppm over -20°C to +70°C		±0.03 ppm over -20°C to +70°C	
			±0.1 ppm over -20°C to +70°C		±0.05 ppm over -20°C to +70°C	
	±0.05 ppm over -40°C to +85°C ±0.1 ppm over -40°C to +85°C ±0.5 ppm over -40°C to +85°C		±0.03 ppm over -40°C to +85°C		±0.05 ppm over -40°C to +85°C	
			±0.05 ppm over -40°C to +85°C		±0.05 ppm over -40°C to +85°C	
			±0.1 ppm over -40°C to +85°C		±0.1 ppm over -40°C to +85°C	
	Aging		AT-cut: ±0.1 ppm typical first year. SC-cut: ±0.05 ppm typical first year.			
Supply Voltage ±5% Variation		±20 ppb max.				
Load ±5% variation		±20 ppb max.				
Warm-up time (at +25°C)		3 minutes max. Within ±0.1 ppm of its reference frequency.				
Voltage Control on pin 1 (EFC) (Electronics Frequency Tuning)		Freq. Deviation Range		AT-cut: ±5 ppm typical SC-cut: ±0.7 ppm typical		
		Control Voltage Range		2.5 V ± 2.0 V		
		Transfer Function		Positive: Increasing control voltage increases output frequency.		
		Input Impedance		100 K Ω min.		
		EFC Linearity		±10% max.		
Power	Power Dissipation (at +25°C)		Warm-up: 500 mA max. Steady-state: 200 mA max.			
Output	Wave Form		Sine			
	Load		50 Ω typical			
	Output Level		0 dBm min.; +3 dBm typical; +5 dBm max.			
	Harmonic		-30 dB min.; -40 dB typical; -45 dB max.			
	Spurious		-75 dB min.; -80 dB typical; -85 dB max.			
	Phase Noise	Offset	10 Hz	100 Hz	1 KHz	10 KHz
		10 MHz AT-cut XTAL	-110 dBc	-135 dBc	-150 dBc	-155 dBc
Storage Temperature			-40°C to +105°C			
Shock			2000 G's, 0.3 ms ½ sine			

MERCURY www.mercury-crystal.com

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OCXO (Oven Controlled Crystal Oscillators)
OC14E12A, OC14GE12A (RoHS version) Series
OC14E12S, OC14GE12S (RoHS version) Series

+12.0 V
Sine Wave

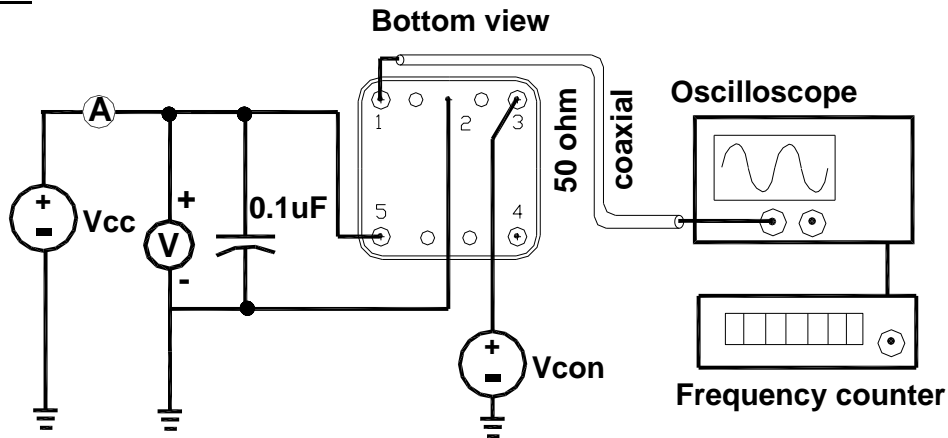


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Vibration

10 to 2000 Hz / 10 G's

OC11E Test Circuit



OC11E Series Package Dimensions and Pin Connections:

unit: mm

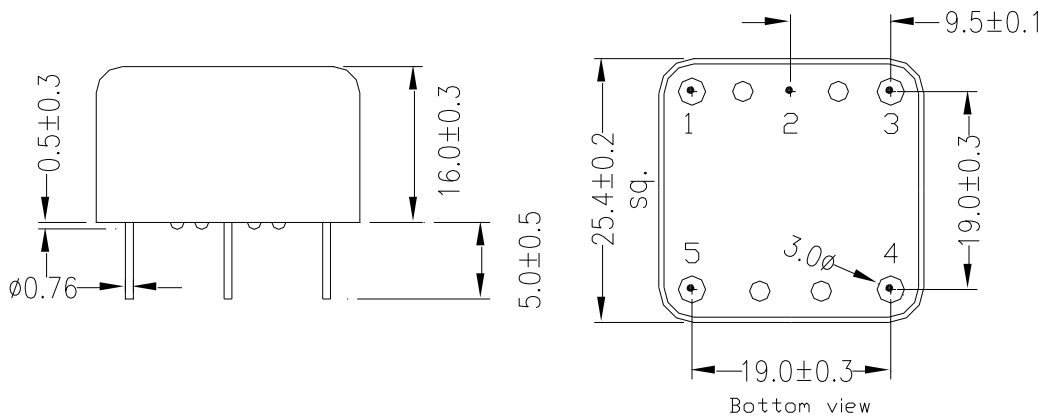
Pin 1: RF Output

Pin 2: Ground / Case

Pin 3: Voltage Control (EFC)

Pin 4: Reference Voltage Output

Pin 5: Supply Voltage Input



Part Number Format and Example:

Example: OC11E5A-10.000-0.1/-20+70

OC11E5	A	—	10.000	—	0.1	/	-20+70
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①	②	dash	③	dash	④	slash	⑤
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①: OC11E5: OC11 series; "E" for 50 ohm load sine wave; "5" for +5.0 V supply voltage

②: Crystal type. "A" for AT-cut crystal; "S" for SC-cut crystal ③: Frequency in MHz

④: Frequency stability in ppm ⑤: Operating temperature range in Celsius