

- ◆ Frequency Stability to Stratum 3 of GR-1244
- ◆ Package and Footprint Identical to Model 118 Stratum 3E for Upgrade Option
- ◆ Low Phase Jitter: <1pSec
- ◆ +3.3Vdc or +5.0Vdc Operation
- ◆ Precision Low Aging "AT" Cut Crystal
- ◆ Through-Hole or Surface Mount Configuration

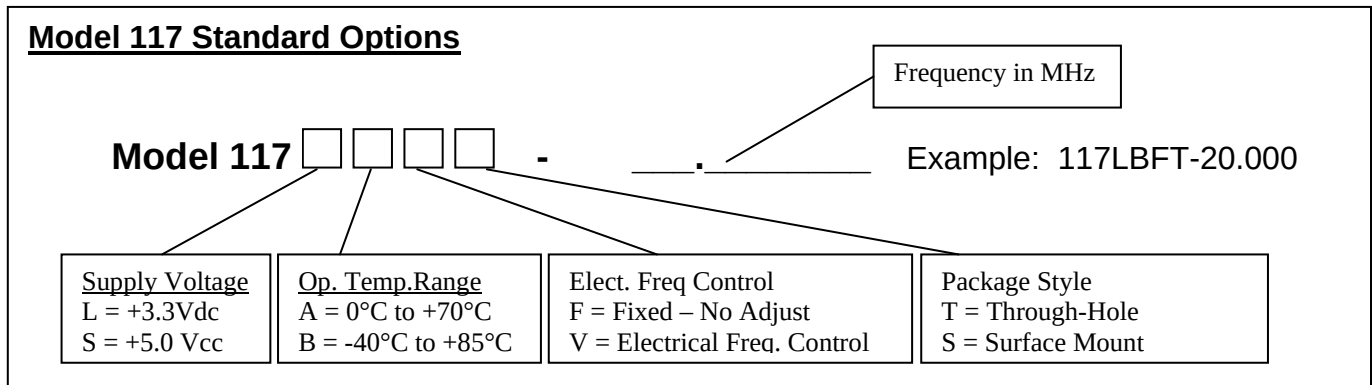


Electrical Characteristics

Parameter	Sym	Conditions	Min	Typical	Max	Unit
Power Requirements						
Power Supply	Vcc	± 5% 117L ± 5% 117S	3.135 4.75	3.30 5.0	3.465 5.25	Vdc Vdc
Turn-On Power	Pmax	Vcc = Max., Std. Load		3.5	4.0	W
Steady State Power	Pss	Vcc = Max, Std. Load @ +25°C		1.5		W
Warm-Up Time	Twu	To within ±0.3 ppm @ +25°C			5	minutes
Frequency Stabilities						
Center Frequency	f _{nom}		10.0	10, 12.8, 16.384, 19.44, 20, 38.88	38.88	MHz
Initial Tolerance	f _{cal}	Ta = +25°C (At time of Shipment)		± 0.2	± 0.5	ppm
Frequency vs. Temperature	Δf/ΔTemp	0°C to +70°C -40°C to +85°C		± 0.075 ±0.150	±0.125 ±0.250	ppm
Frequency vs. Voltage	Δf/ΔVcc	Vcc ± 5%		± 10		ppb
Frequency vs Time (Aging)	Δf/ΔTime	per Day 20 years		± 5 ±2.5		ppb ppm
24 Hour Holdover Stability	Δf/24Hr	Inclusive of Temperature, Supply Variation and 24 hours Aging		±0.20	±0.37	ppm
Total Free-Running Accuracy	Δf/Life	All Conditions for 20 years (Reference to f _{nom})			± 4.6	ppm
Electrical Freq Adjust Option	Δf/Vc	Vc = 0 V to Vcc	±9.2			ppm
Waveform: HCMOS Output						
Symmetry	Sym	@ 50% Level	40	50	60	%
Amplitude	Vo	Logic "1" Logic "0"	0.9Vcc		0.1Vcc	V V
Rise/Fall Times	tr, tf	20% to 80%		6	10	nSec
Load	RL	Output to Ground		10KΩ // 15pF		
Phase Noise		Offset = 10 Hz		-80		dBc/Hz
		100 Hz		-115		dBc/Hz
		1K Hz		-135		dBc/Hz
		10 KHz		-140		dBc/Hz
		100 KHz		-143		dBc/Hz

Environmental and Mechanical Requirements	
Storage Temperature :	-55°C to +125°C
Reflow Soldering :	Will withstand 240°C for 20 seconds
Shock :	50 G's 11 ms, Pulse, 3 shocks per axis
Vibration :	10G's Peak, 20 to 2000 Hz
Case :	Dual-in-Line
Seal :	Resistance Weld
Surface Mount Base :	High Temperature FR-4
MSL :	1
6/6 RoHS Compliance :	This product is fully compliant to RoHS Directive 2002/95/EC

Model 117 Standard Options



Package Specifications

Figure 1

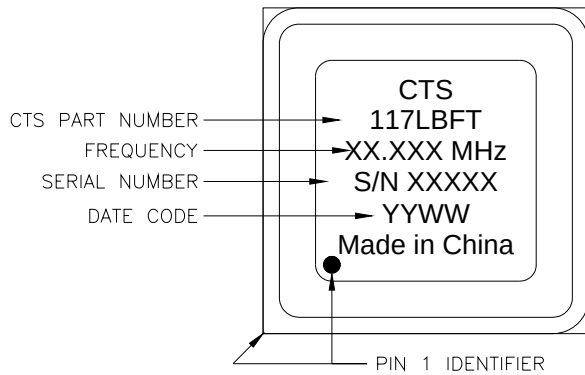
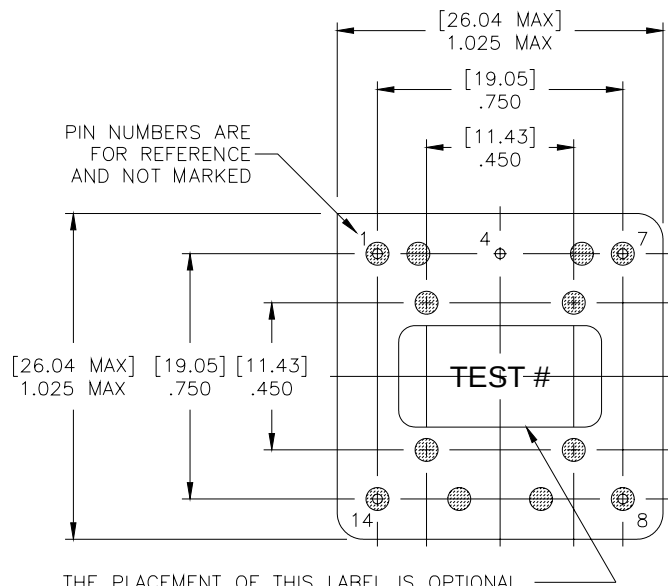
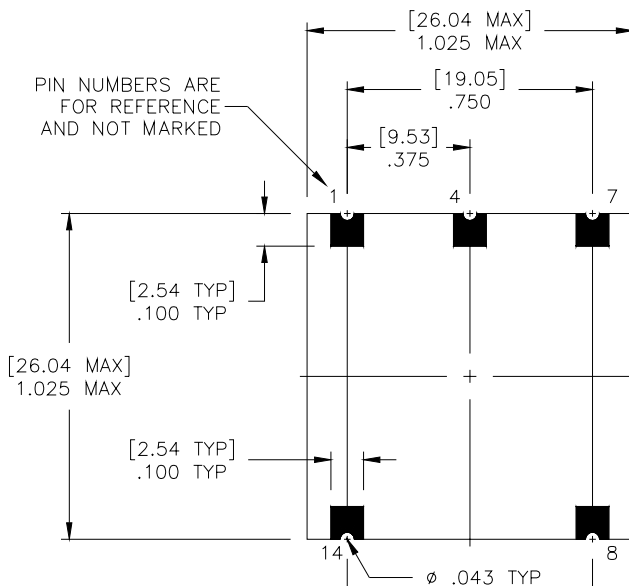
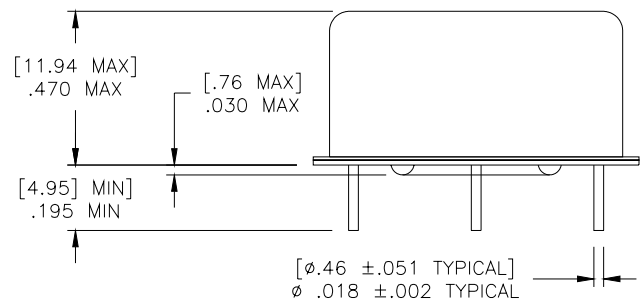
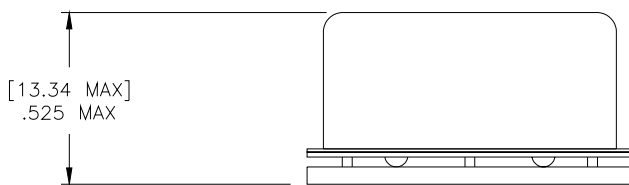
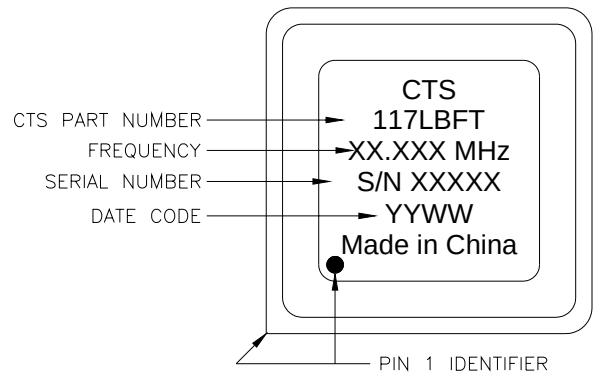


Figure 2



PAD TERMINATION FINISH : GOLD PLATED,
 <10 MICROINCH, OVER NICKEL PLATED COPPER

LEAD TERMINATION FINISH : SOLDER COATED, 96.5/3.5 Sn/Ag

PIN #	FUNCTION
1	RF OUTPUT
4	GROUND/CASE
7	N/C or EFC
8	N/C
14	Vcc

KEY : [MM]
INCH

TOLERANCES : $[\pm.13]$
 $\pm.005$

Recommended Land Patern (Surface Mount Pkg.)

