

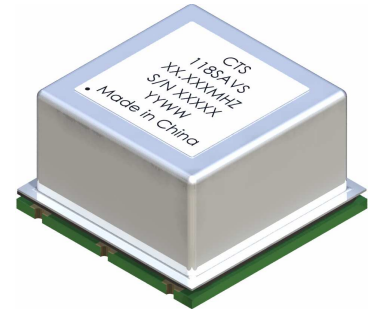


# Model 118

## 1"x1" Stratum 3E OCXO

### FEATURES

- ◆ Frequency Stability to Stratum 3E of GR-1244
- ◆ Low Phase Jitter: <1pSec
- ◆ +3.3Vdc or +5.0Vdc Operation
- ◆ Precision Low Aging "SC" Cut Crystal
- ◆ Through-Hole or Surface Mount Configuration
- ◆ RoHS Compliant



### Electrical Characteristics

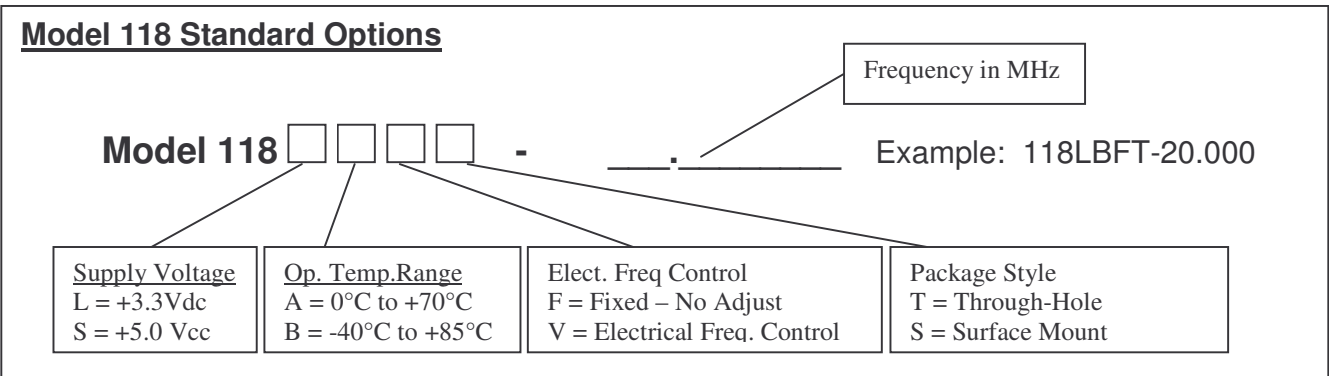
Parameter	Sym	Conditions	Min	Typical	Max	Unit
<b>Power Requirements</b>						
Power Supply	Vcc	± 5% ± 5%	3.135 4.75	3.30 5.0	3.465 5.25	Vdc Vdc
Turn-On Power	Pmax	Vcc = Max., Std. Load		3.5	4.0	W
Steady State Power	Pss	Vcc = Max, Std. Load @ +25°C		1.5		W
Warm-Up Time	Twu	To meet full spec @ +25°C			15	minutes
<b>Frequency Stabilities</b>						
Center Frequency	f <sub>nom</sub>		10.0	10, 12.8, 16.384, 19.44, 20, 25, 26	38.88	MHz
Initial Tolerance	f <sub>cal</sub>	Ta = +25°C (At time of Shipment)		± 0.2	± 0.5	ppm
Frequency vs. Temperature	Δf/ΔTemp	Over Operating Temperature		± 6	± 8	ppb
Frequency vs. Voltage	Δf/ΔVcc	Vcc ± 5%		± 1		ppb
Frequency vs Time (Aging)	Δf/ΔTime	per Day 20 years		± 1	± 1.5	ppb ppm
24 Hour Holdover Stability	Δf/24Hr	Inclusive of Temperature, Supply Variation and 24 hours Aging		± 8	± 10	ppb
Total Free-Running Accuracy	Δf/Life	All Conditions for 20 years (Reference to f <sub>nom</sub> )			± 2.1	ppm
Electrical Freq Adjust Option	Δf/Vc	Vc = 0 V to Vcc	±0.75			ppm
<b>Waveform: HCMOS Output</b>						
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%		4	7	nSec
Load	RL	Output to Ground		10KΩ // 15pF		
Sub-Harmonics					-25	dBc
Phase Noise		Offset = 1 Hz		-70	-60	dBc/Hz
		10 Hz		-105	-95	dBc/Hz
		100 Hz		-130	-125	dBc/Hz
		1 KHz		-140	-130	dBc/Hz
		10 KHz		-142	-135	dBc/Hz



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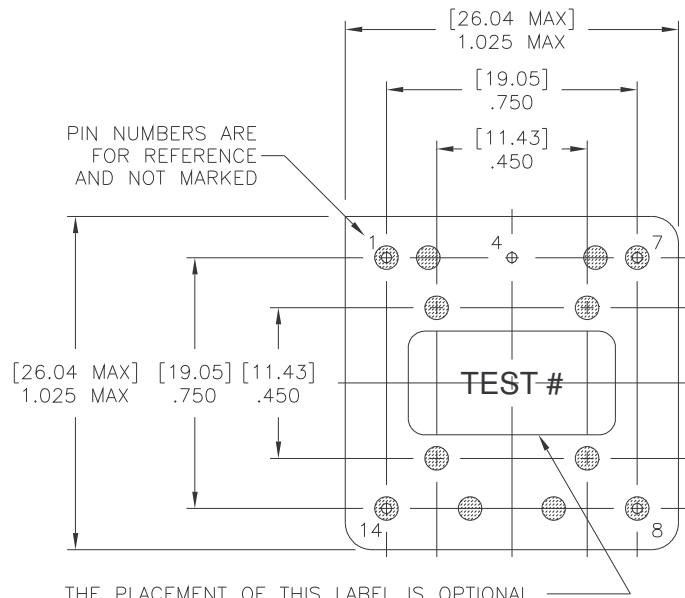
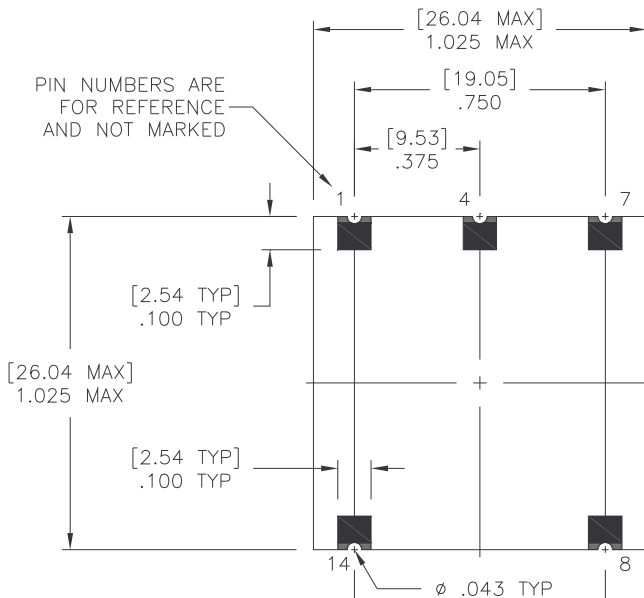
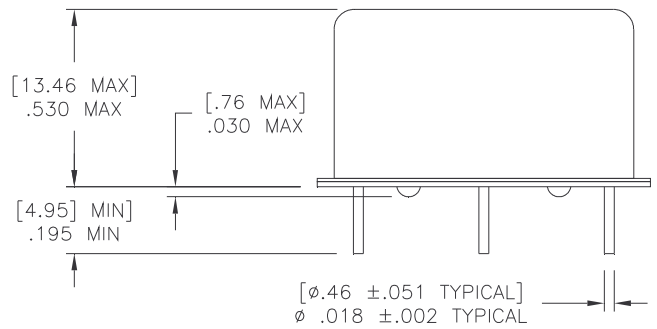
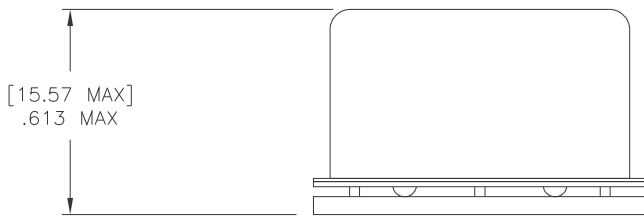
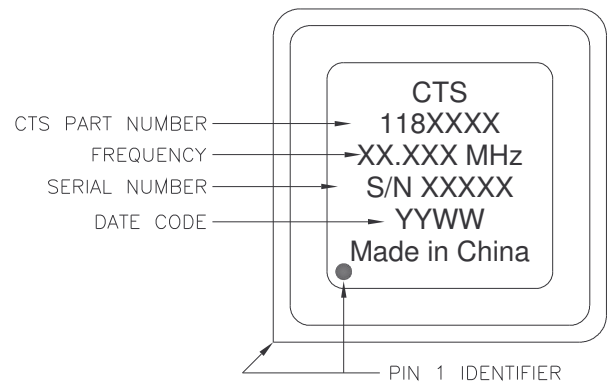
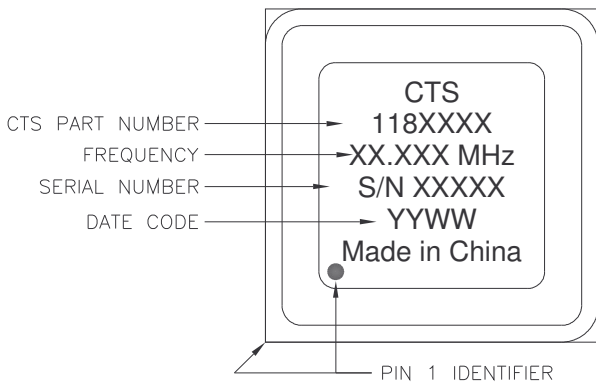
Environmental and Mechanical Requirements	
Storage Temperature :	-55°C to +125°C
Reflow Soldering :	Will withstand 240°C for 20 seconds
Shock :	50 G's 11 ms, Pulse, 3 shocks per axis
Vibration :	10G's Peak, 20 to 2000 Hz
Case :	Dual-in-Line
Seal :	Resistance Weld
Surface Mount Base :	High Temperature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



### Package Specifications

Figure 1

Figure 2



PAD TERMINATION FINISH : GOLD PLATED,  
 <10 MICRINCH, 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 : [±.13]  
±.005

#### Recommended Land Pattern (Surface Mount Pkg.)

