

# TT5000LF

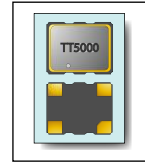
## Crystal Oscillator



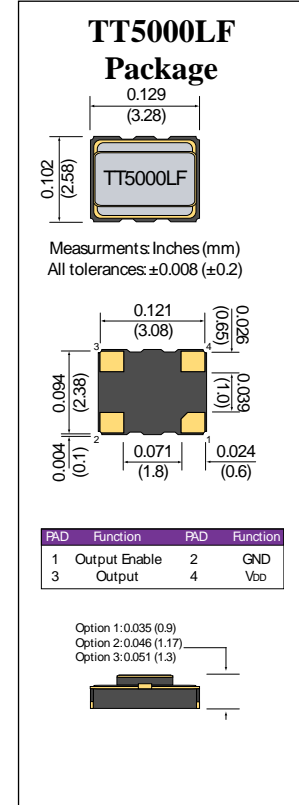
**FEATURES:**

**32.768 kHz**  
**Ceramic Package**

**Low Current Draw**  
**3.28 x 2.58 x 1.3 mm**



Parameter	Unit	Min.	Max.
Nominal Frequency	kHz	32.768	
Operating Temperature Range	°C	-40	+85
Storage Temperature Range	°C	-55	+85
Frequency Tolerance at 25°C	ppm	-	±1.5
Frequency Stability			
vs. Temperature Range	ppm	-	±5.0
vs. Load (±10%) change	ppm	-	±0.2
vs. Supply Voltage (±5%) change	ppm	-	±1.0
Aging (per year)	ppm	-	±3.0
Voltage	V	1.8, 2.5, 3.0, 3.3, 5.0 ±5%	
Voltage Variation	V	-	0.25
Current Consumption	uA	2.05 typical for 5 V	
Output Waveform		CMOS	
Output Load	pF	15 typical	
“0” Level		0.4 V max; I <sub>OH</sub> = 0.1 mA	
“1” Level		0.4 V min; I <sub>OH</sub> = 0.1 mA	
Duty Cycle	%	40/60 typical	
Timing error over time			
per day	sec/day	-	±0.432
per month	sec/month	-	±12.96
per year	min/year	-	±2.628
Rise and Fall Time	nSec	-	100
Reflow	ppm	-	±1.0
Start-up Time @ 25°C	mSec	-	1
Start-up Time over Temperature Range	mSec	-	3
Tristate			
Enable		80% V <sub>DD</sub>	-
Disable		-	20% V <sub>DD</sub>



**Environmental**

Terminal Material	W
Terminal Plating	Ni-Au
REACH Compliant	Yes
RoHS Compliant	Yes
RoHS Exemptions	No
Re-flow Temp. Max.	260°C
MSL	1



**Example Part Number:** TT5000LF-A-18-48-32M768

