

SMD CYLINDRICAL CRYSTALS

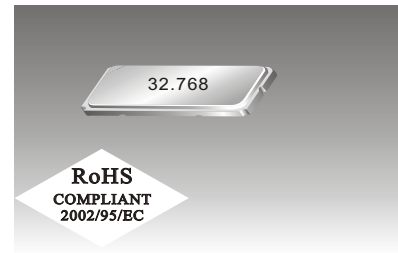
TGS SERIES NO. : CCML

FEATURES

- Ultra thin package 0.7mm Max height
- Designed for reflow soldering
- Excellent performance on environmental capability environmental capability
- Good for high density mounting, small and thin equipments

APPLICATIONS

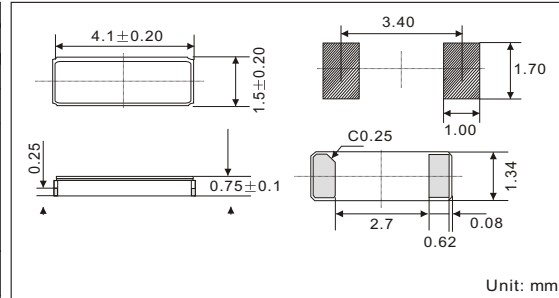
- Microprocessor Systems
- Communications



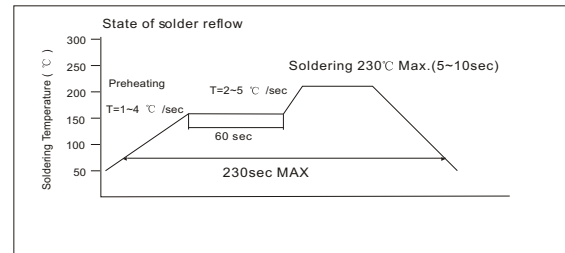
SPECIFICATION *

Parameters	Product	Option Code
	CCML	CCML
Frequency Range: 32.768000000KHz	△	Specify
Oscillation Mode: AT Fund.	△	A
Frequency Tolerance: ±10ppm ±20ppm ±30ppm ±50ppm Other Values	△	10
	△	20
	△	30
	▲	50
	△	Specify
Load Capacitance: 12.5pF	▲	12.5
Frequency/Temp Coefficient: -0.035±0.008ppm/°C² typ	▲	
Operating Temp. Range: -40°C~+85°C	▲	40
Storage Temp. Range: -50°C~+120°C	▲	
Turnover Temp. (To): 25°C ±5°C	▲	
Equivalent Series Resistance (ESR): 65K OHMS MAX	△	65
Drive Level: 0.1 uW Max.	▲	
Shunt Capacitance (C0): 0.85pF Typ.	▲	
Dynamic Capacitance(C1): 2.0fF Typ	▲	
Soldering Conditions: 240°C, 10sec Max	▲	
Quality Factor (Q): 100000typ	▲	
Aging: ±5ppm Max.	▲	
Package: Tape/Reel	△	T
Other Values: Lead Free	△	LF

DIMENSIONS



SOLDER REFLOW PROFILE



▲ Standard * Specifications Subject to Change Without Notice
△ Optional: please specify required code when inquiring or ordering

PACKAGE

- Standard package in T/R:3000pcs per reel.
- See page 120 for detail dimensions

PART NUMBER GUIDE

TGS	CC	M	L	32K768	A	30	- 12.5	-40	-65	-T	LF
Mark	Cylindrical Crystals	SMD Type	L: Type L	Freq. Range	Oscillation Mode	Freq. Tolerance	Load Capacitance	Operating Temp. Range	ESR	Package	Lead free

e.g. Full P/N.: TGS CCML32K768A30-12.5-40-65 T LF

Short P/N.: CCML32K768A12.5 T LF (Others is standard Spec.)