

FEATURES

- Plastic Moulded SMD Package ● Small Size 8.0X3.8X2.5mm
- Wide Operating Temp. Range At -40°C~+85°C ● Lead Free available
- Cross reference CM200S Citizen and MC-306 Epson

APPLICATIONS

- Microprocessor Systems ● Communications

SPECIFICATION *

Parameters	Product	Option Code
	SMD308C	CCMC
Frequency Range:	32.768-153.6KHz	△ Specify
Oscillation Mode:	AT Fund	△ A
Frequency Tolerance:	±10ppm	△ 10
	±20ppm	△ 20
	±30ppm	△ 30
	±50ppm	▲ 50
	Other Values	△ Specify
Load Capacitance:	12.5pF	▲ 12.5
	Other Values	△ Specify
Frequency/Temp Coefficient:	-0.038ppm/°C ²	▲
Operating Temp. Range:	-40°C~+85°C	▲ 40
Storage Temp. Range:	-40°C~+85°C	▲
Turnover Temp. (To):	25°C±5°C	▲
Equivalent Series Resistance (ESR):	See Table 1	△ Specify
Drive Level:	1.0 uW Max.	▲
Shunt Capacitance (C0):	1.3pF Typ.	▲
Dynamic Capacitance(C1):	2.4fF Typ	▲
Soldering Conditions:	240°C, 10sec Max	▲
Quality Factor (Q):	100000 Typ	▲
Aging:	±5ppm Max.	▲
Package:	Tape/Reel	△ T
Other Values:	Lead Free	△ LF

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

PACKAGE

- Standard package in T/R: 3000pcs/Reel, 2Reel/box, 5box/carton
 See page 120 for detail dimensions

ESR VALUES

Table 1

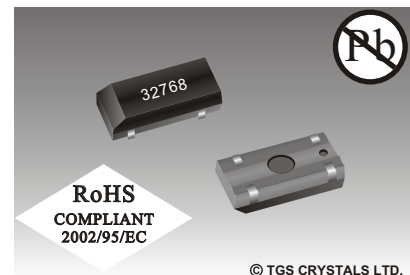
Frequency Range (KHz)	ESR Max (K ohm)	Frequency Range (KHz)	ESR Max (K ohm)
30.0000~39.9990	50	70.0000~99.9990	35
40.0000~59.9990	40	100.000~153.600	30
60.0000~69.9990	35		

PART NUMBER GUIDE

TGS	CC	M	C	32K768	30	- 12.5	-40	-50	- T
Mark	Cylindrical Crystals	SMD Type	8.0X3.8X2.5mm	Freq. Range	Freq. Tolerance	Load Capacitance	Operating Temp. Range	ESR	Package

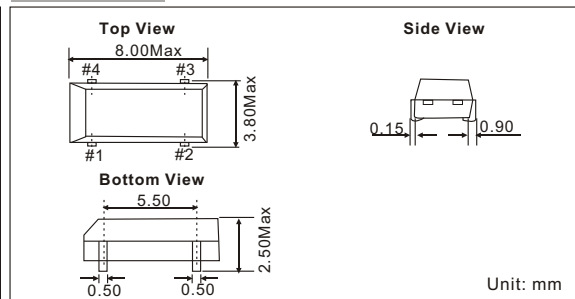
e.g. Full P/N.: TGS CCMC 32K768A50-12.5-40-40 T

Short P/N.: CCMC 32K768A12.5 T (Others is standard Spec.)

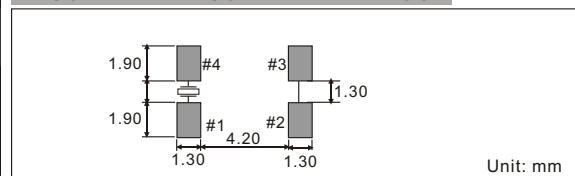


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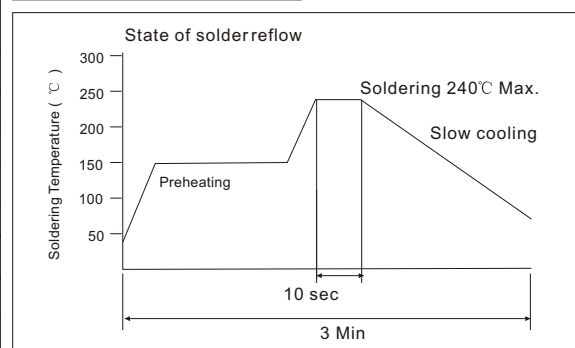
DIMENSIONS



RECOMMENDED SOLDER PAD LAYOUT



SOLDER REFLOW PROFILE



FREQUENCY VS TEMP. CURVE

