

# 3.2x2.5 SMD Crystal

## Part Number Guide

T-M-FF.FFFM-LC-FTFS-OT-ESR-TR-S

T (Type型号): K=3.2x2.5 SMD 4pads

M (Mode of Operation振荡模式): F=Fundamental T=Third Overtone, etc

F (Frequency标称频率): Normal - 5 digitals of Frequency, e.g. 12.000M

Special - All digitals of Frequency, e.g. 13.225625M

LC (Load Capacitance负载电容): 20=20pf 00=series, etc

FT (Frequency Tolerance调整频差): 30= $\pm 30$  ppm, etc

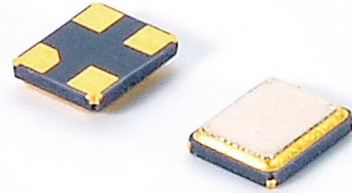
FS (Frequency Stability温度频差): 50= $\pm 50$  ppm, etc

OT (Operating Temperature工作温度): 1060= $-10^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  4085= $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ , etc

ESR (Equivalent Series Resistance等效阻抗)

TR (Tape and Reel编带)

S (Special Requirement特殊要求)



Pb Free

RoHS Compliant  
 Directive 2002/95/EC

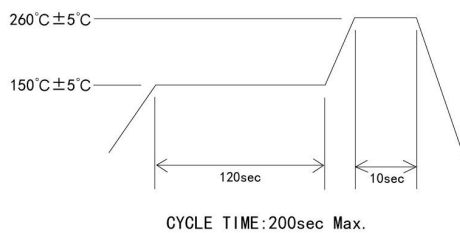
## Electrical Specifications 电气参数

型号	Holder Type	3.2x2.5mm Ceramic Surface Mount
频率范围	Frequency Range	12.000MHz to 150.00MHz
调整频差	Frequency Tolerance ( $\Delta F$ ) (at 25°C)	$\pm 10$ ppm to $\pm 100$ ppm
温度频差	Frequency Stability	$\pm 10$ ppm to $\pm 100$ ppm
工作温度范围	Operating Temperature Range	$-10^{\circ}\text{C}$ ~ $+60^{\circ}\text{C}$ to $-40^{\circ}\text{C}$ ~ $+85^{\circ}\text{C}$
储存温度范围	Storage Temperature Range	$-40^{\circ}\text{C}$ ~ $+85^{\circ}\text{C}$ / $-55^{\circ}\text{C}$ ~ $+125^{\circ}\text{C}$
老化	Aging (25°C)	$\pm 5$ ppm/year Maximum
静电容	Shunt Capacitance (C0)	7pF Maximum
激励功率	Drive Level	10 $\mu$ W Typical
绝缘阻抗	Insulation Resistance (Rs)	500 Megaohms Minimum at D.C100V
负载电容	Load Capacitance (CL)	Suggested by customer

## Equivalent Series Resistance and Mode of Operation 等效阻抗和振荡模式

Frequency Range 频率范围	ESR ( $\Omega$ ) 等效阻抗	Mode 振荡模式
12.000-13.000MHz	100Max	Fundamental
13.000-16.000MHz	80Max	Fundamental
16.000-20.000MHz	60Max	Fundamental
20.000-26.000MHz	50Max	Fundamental
$\geq 26.000$ MHz	40Max	Fundamental

## Reflow Condition 回流焊条件



## Mechanical Dimensions 外型尺寸

