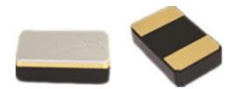


MAIN FEATURE

- 32.768KHz • Ultra-Small Package • 2 Pads

APPLICATION

- Smart phone and mobile communication and more

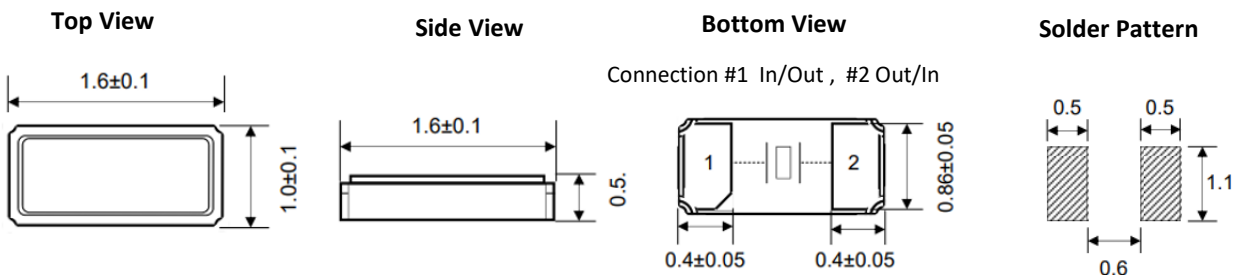


L1.6*W1.0*H0.5mm

STANDARD SPECIFICATION

Parameter	Value			Unit	Condition	
	Min.	Type	Max.			
Frequency Range	-	32.768	-	KHz		
Oscillation Mode	AT Fund.					
Frequency Tolerance	-	±20		ppm	@25 °C or Specify	
Operating Temperture Range	-40	-	+85	°C	CL: 9.0pF or Specify	
Storage Temperature Range	-55	-	+125	°C		
Load Capacitance (CL)	-	12.5	-	pF		
Frequency/Temp Coefficient	0.028	0.034	0.04	ppm/C ²		
Turnover Temp	+20	+25	+30	°C		
Equivalent Series Resistance		-	90	Kohm		
Drive Level	-	-	0.5	μW		
Shunt Capacitance	0.9	1.5	2.0	pF		
Dynamic Capacitance	-	2.3	-	Ff		
Quality Factor		60000				
Capacitance Ratio	-	450	-			
Aging per year	-	±3		ppm/year		
Insulation Resistance	500	-	-	Mohm		@ 100Vdc ± 15V

DIMENSION (mm)



PART NUMBER GUIDE

Example: TGS CCMV 32K768A20-12.5-40-90 TLF

[Part Number and Part Code Structure](#)

TGS	CCMV	32K768	A	20	-12.5	-40	-90	T	LF	XX
1	2	3	4	5	6	7	8	9	10	11

- 1) TGS: Company Code
- 2) CCMV: KHz SMD Crystals, L1.6*W1.0*H0.5mm
- 3) 32K768: Frequency Range 32.768000KHz
- 4) A: Oscillation Mode, AT Fund.
- 5) 20: Frequency tolerance: +/-20ppm or specify
- 6) 12.5: Load Capacitance, 12.5pF; 9: 9.0pF or Specify
- 7) 40: Operating Temp. Range -40°C ~+85°C,
- 8) 90: Equivalent Series Resistance, 90 Kohm Max.
- 9) T: Package in Tape/Reel, 3000pcs/Reel
- 10) LF: RoHS compliant
- 11) XX: Internal Control Code- 2 letter or digits ; Blank: N/A

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