

TCME32 Series

32.768kHz TCXO, 3.2 x 2.5mm, CMOS

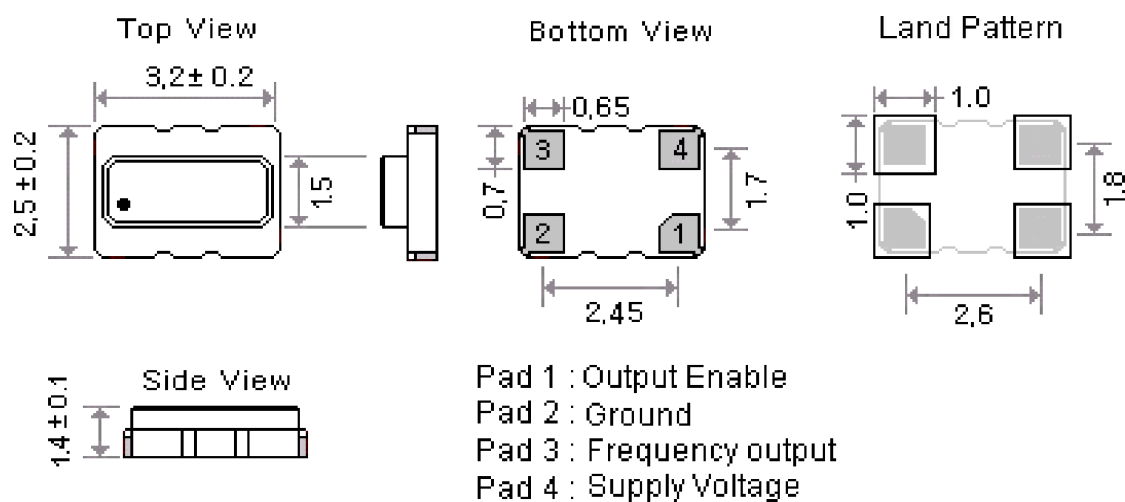


REACH and RoHS compliant
µA current consumption

Parameters		Specification		Remarks
Frequency	F_nom	32.768kHz		
Supply voltage	Vcc	1.8V, 2.5V, 3.0V, 3.3V		±5% voltage change
Supply voltage variation		0.25V max		$\Delta V/\Delta T = 1V/\mu s$
Initial frequency tolerance	F_tol	±2.5ppm max		At +25°C±3°C
Frequency stability	vs Temperature	F_stb	±5.0ppm max	-40°C to +85°C
	vs Load change	F_load	±0.2ppm max	±10% load condition change
	vs Voltage change	F_Vcc	±0.2ppm max	±5% input voltage change
	vs Aging	F_age	±3.0ppm/year max	First year at +25°C
	vs Reflow		±3.0ppm/year max	1 reflow and measured after 24hrs
	vs all range Vcc		±1.0ppm/volt max	
Operating temperature range (°C)	Topr	-40°C ~ +85°C		
Storage temperature (°C)	Tstg	-55°C ~ +85°C		
Output waveform		CMOS		
Output load		15pF		
Output voltage high	Voh	90% VDD min		For all Vcc range
Output voltage low	Vol	10% VDD max		For all Vcc range
Current consumption no load	Icc	1.0 uA typ , 2.0 uA max		
Rise and fall time	Tr, Tf	100ns max		20% to 80% of waveform
Duty cycle	SYM	40%/60% typical		
Start-up time	T_str	0.5 sec max at 25°C		
Pad 1 OE thresholds		Vih = 0.8Vcc, Vil = 0.2Vcc		
Timing error over time		± 0.432 sec/day ; ± 12.960 sec/month ; ± 2.628 minutes / year ,		For ±5ppm over -40°C ~ +85°C

Note: The device is ESD sensitive and moisture sensitive level (MSL) - 1

Dimensions (Unit:mm)



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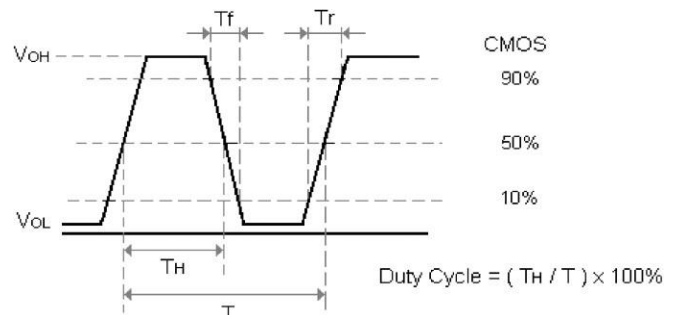
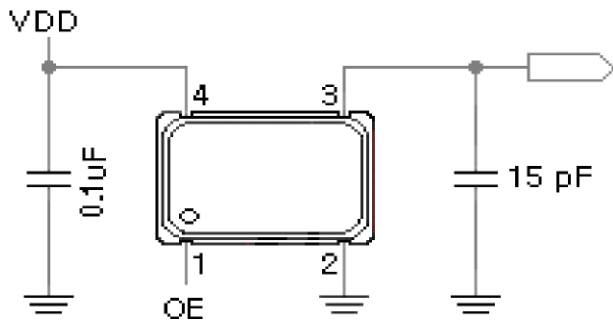
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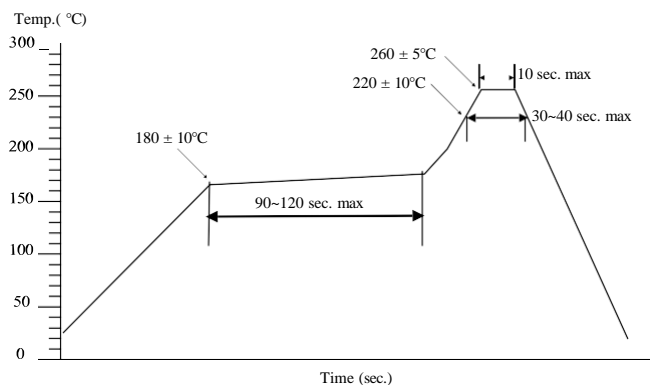
TCXO part number generation											
TC32M	00003	F	B	I	N	E	X	X	S	L	-PF
ACT series Code	Frequency (MHz) Ex. 32.768kHz	Temp. stability (±ppm)	Supply voltage (V)	Operating temp. range (°C)	Frequency tuning (±ppm)	Output wave	Mechanical tuning (±ppm)	Polarity	Duty Cycle	Tape & Reel	RoHS Code
TC32M	5 digit require to specify kHz frequency. ≤ 99.99kHz 10=00001 32.768=00003 ≥ 100kHz 100=00010 250=00025	5.0 = F	1.8V = D 2.5V = C 3.0V = E 3.3V = B	-40 ~ +85 = I	None = N	HCMOS = E	None = X	None = X	40%/60% = S	Loose = L 1000 = C 3000 = D	-PF

Note: It is important to suffix the above part number with full frequency required to give a completed part number as illustrated below.
Full Example part number : **TC32M00003FBINEXXS-D-PF [32.768KHz]**

Test circuit



Solder reflow profile



Drawing control: (Internal use only)
Commodity code: 854370 90 99
Issue number : 2
Date : 10/03/2025
Internal reference : M6