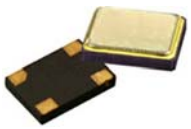
(V)TSK3225 Series

TCXO/VC-TCXO, 3.2 x 2.5mm, Clipped sine wave

From ±0.5ppm stability over 0°C to 50°C



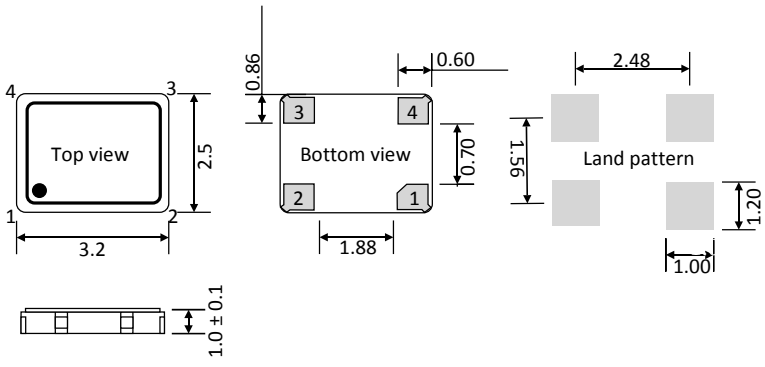
Parameters			Specification	Remarks
Frequency range		F_nom	12.0MHz ~ 54.0MHz	
Supply voltage		Vcc	1.8V ~ 3.0V	Frequency stability ±0.5ppm over temp.
			2.5V ~ 3.4V	Frequency stability ±2.0ppm over temp.
Initial frequency tolerance		F_tol	±1.0ppm max.	At +25°C±2°C
Frequency stability	vs Temperature	F_stb	±0.5ppm ~ ±3.0ppm	Table 1
	vs Load	F_load	±0.2ppm max.	±10% load condition change
	vs Voltage	F_Vcc	±0.2ppm max.	±5% input voltage change
	vs Aging	F_age	±1.0ppm/year max.	At +25°C
	vs Reflow		±1.0ppm/year max.	1 reflow and measured after 24hrs
Operating temperature range (°C)		Topr	0°C ~ +50°C to -40°C ~ +85°C	Table 1
Storage temperature (°C)		Tstg	-40°C ~ +85°C	
Output wave form			Clipped sine wave	
Output voltage level			0.8V p-p (min.)	
Output Load			10KΩ//10pF	
Current consumption		Icc	2mA max.	
Phase noise (dBc/Hz)			-130dBc/Hz	1kHz offset
VC-TCXO option only				
Control voltage		Vc	For 2.5V ~ 3.4V : 1.4V ± 1.0V , 1.5V ± 1.0V	Normally Vcc/2 ± 0.6 ~ 1.0V
			For 1.8V ~ 3.0V : 0.9V ± 0.6V , 1.4V ± 1.0V	Normally Vcc/2 ± 1.0 ~ 1.35V
Frequency tuning (ppm)			±5.0ppm, ±10.0ppm	
Linearity/Slope polarity			±10.0% max/Positive slope	
ESD sensitive device			Yes	
Moisture sensitive level (MSL)			1	

Note: 1 The voltage is specified as a range. However we do need a specific voltage to be specified to use at test and inspection. Consequently when enquiring a specific voltage within the range must be specified. Device will function over the entire range, however the full specification is guaranteed within ±5 of specific voltage.

Table 1 Frequency stability vs Temperature

Temp. (°C)	Stability in ppm					
	±0.5	±1.0	±1.5	±2.0	±2.5	±3.0
0°C to 50°C	√	√	√	√	√	√
-10°C to 60°C	√	√	√	√	√	√
-20°C to 70°C	√	√	√	√	√	√
-30°C to 75°C	√	√	√	√	√	√
-30°C to 85°C	√	√	√	√	√	√
-40°C to 85°C	X	√	√	√	√	√

Dimensions(Unit:mm)



Pad 1 : Control voltage (VCTCXO). No connection(TCXO)

Pad 2 : Ground

Pad 3 : Output

Pad 4 : Supply voltage

Advanced Crystal Technology (A wholly owned Acal BFi Company)
Tel: +44 (0) 118 978 8878 Email info@actcrystals.com / www.actcrystals.com
ISO9001 Registered

(V)TSK3225 Series

TCXO/VC-TCXO, 3.2 x 2.5mm, Clipped sine wave

TCXO part number generation											
TS32	**2600**	**M**	**B**	**X**	**N**	**B**	**N**	**X**	**Z**	**L**	**-PF**
ACT series Code	Frequency (MHz) Ex. 26.00MHz	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
TS32	< 100MHz First 4 digit of frequency > 100MHz First 5 digit of frequency	0.5 = R 1.0 = P 1.5 = O 2.0 = N 2.5 = M 3.0 = L	1.8V = D 2.5V = C 3.0V = E 3.3V = B	0 ~ 50 = D -10 ~ +60 = F -20 ~ +70 = B -30 ~ +75 = W -30 ~ +85 = X -40 ~ +85 = K	None = N	CSW = B	None = X	None = X	Not Specified = Z	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 : **TS322600MBXNBXXZL-PF [26MHz], TS321474MBXNBXXZL-PF [14.7456MHz]**

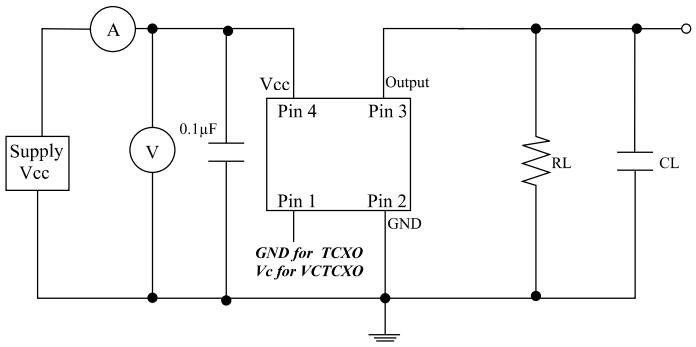
VC-TCXO part number generation													
VTS32	**1474**	**M**	**B**	**X**	**N**	**B**	**X**	**D**	**P**	**E**	**Z**	**L**	**-PF**
ACT series Code	Frequency (MHz) Ex. 14.7456MHz	Temp. stability (±ppm)	Supply voltage (V)	Operating temp. range (°C)	Frequency tuning (±ppm)	Output wave Form	Mechanical tuning (±ppm)	Electrical tuning (±ppm)	Polarity	Linearity	Duty Cycle	Tape & Reel	RoHS code
VTS32	< 100MHz First 4 digit of frequency > 100MHz First 5 digit of frequency	0.5 = R 1.0 = P 1.5 = O 2.0 = N 2.5 = M 3.0 = L	1.8V = D 2.5V = C 3.0V = E 3.3V = B	0 ~ 50 = D -10 ~ +60 = F -20 ~ +70 = B -30~ +75 = W -30 ~ +85 = X -40 ~ +85 = K	Voltage control only = E	CSW = B	None = X	±5.0 = D ±10.0 = F	Positive = P	±10% = E	Not Specified = Z	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 : **VTS321474MBXEBXDPEZL-PF (14.7456MHz)**

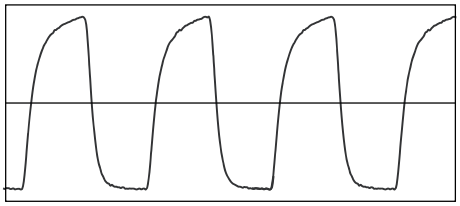
(V)TSK3225 Series

TCXO/VC-TCXO, 3.2 x 2.5mm, Clipped sine wave

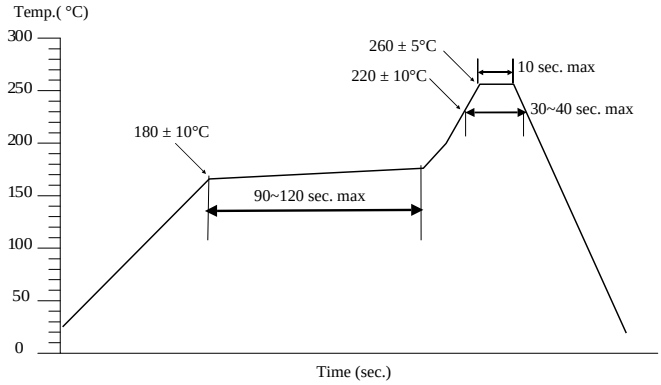
Test circuit



Clipped sine waveform



Solder reflow profile



Drawing control: (Internal use only)
Commodity code: 854370 90 99
Issue number : 1
Date : 11042016
Internal reference : Skr