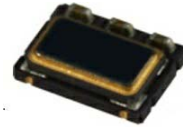


# (V)TCSW75 Series

## TCXO/VC-TCXO, 7.0 x 5.0mm, Clipped sine wave

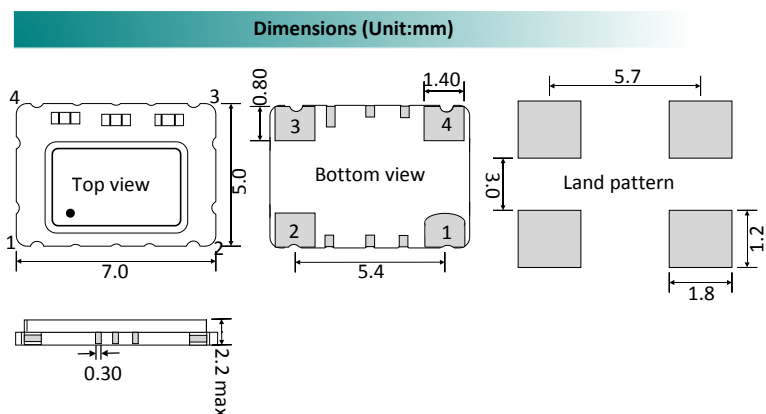
From  $\pm 0.5$ ppm stability over 0°C to 50°C  
ESD sensitive and moisture sensitive level (MSL) - 1



Parameters		Specification	Remarks
Frequency range	F_nom	10.0MHz ~ 50.0MHz	
Supply voltage	Vcc	3.3V, 5.0V	
Initial frequency tolerance	F_tol	$\leq \pm 1.0$ ppm	At +25°C $\pm 2$ °C
Frequency stability	vs Temperature	F_stb $\pm 0.5$ ppm ~ $\pm 3.0$ ppm	Table 1
	vs Load	F_load $\pm 0.2$ ppm max.	$\pm 10\%$ load condition change
	vs Voltage	F_Vcc $\pm 0.2$ ppm max.	$\pm 5\%$ input voltage change
	vs Aging	F_age $\pm 1.0$ ppm/year max.	At +25°C
	vs Reflow	$\pm 1.0$ ppm/year max.	1 reflow and measured after 24hrs
Operating temperature range (°C)	Topr	0°C ~ +50°C to -40°C ~ +85°C	Table 2
Storage temperature (°C)	Tstg	-55°C ~ +125°C	
Output wave form		Clipped sine wave	
Output voltage level		0.8V p-p (min.)	
Output load		10K $\Omega$ //10pF	
Output format		DC block, AC coupled.	
Current consumption	Icc	10.0~15MHz: 1.5mA, 15.01~26.0MHz: 2.0mA 26.01~40.0MHz: 2.5mA	
Start-up time	T_str	2.0m sec (typ.), 5.0m sec. (Max.)	Reach 90% amplitude at +25°C $\pm 2$ °C
<b>VC-TCXO option only</b>			
Control Voltage	Vc	1.5V $\pm$ 1.0V	For both Vcc = 3.3V and 5.0V
Frequency tuning (ppm)		$\pm 5.0$ ppm	
Linearity/Slope polarity		$\pm 10.0\%$ max/Positive slope	Positive voltage for positive frequency shift
Input impedance		1.0M $\Omega$ min	
Modulation bandwidth		3.0kHz min	

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

Phase noise (13.0MHz example)	dBc/Hz typical
10Hz	-80
100Hz	-115
1kHz	-135
10kHz	-148
100kHz	-148



- Pad 1 : Control voltage (VCTCXO). No connection(TCXO)
- Pad 2 : Ground
- Pad 3 : Output
- Pad 4 : Supply Voltage

TCXO part number generation											
TC75	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
TC75	< 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	3.3V = B 5.0V = A	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 : [TC752600MBXNBXXZL-PF \[26MHz\]](#), [TC751474MBXNBXXZL-PF \[14.7456MHz\]](#)

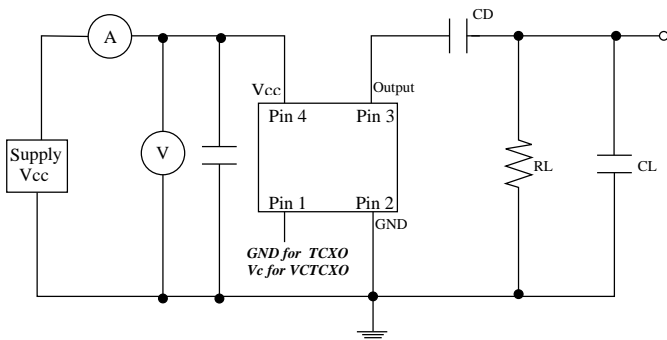
VC-TCXO part number generation													
VTC75	1474	M	B	X	N	B	X	D	P	E	Z	L	-PF
ACT Series Code	Frequency (MHz) Ex. 14.7456MHz	Temp. stability (±ppm)	Supply voltage (V)	Operating temp. range (°C)	Frequency tuning (±ppm)	Output wave Form	Mechanical tuning (±ppm)	Electrical tuning (±ppm)	Polarity	Linearity	Duty Cycle	Tape & Reel	RoHS code
VTC75	< 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	3.3V = B 5.0V = A	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	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 : [VTC751474MBXBXDPEZL-PF \(14.7456MHz\)](#)

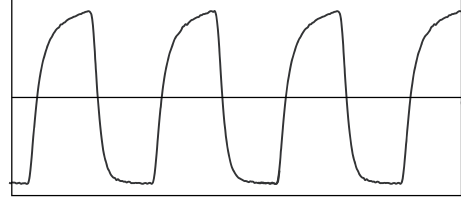
# (V)TCSW75 Series

TCXO/VC-TCXO, 7.0 x 5.0mm, Clipped sine wave

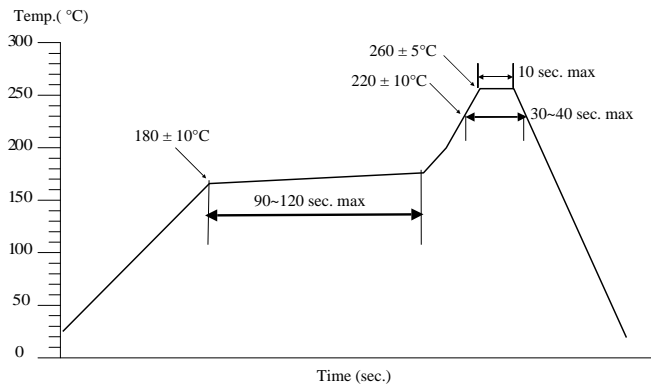
## Test circuit



## Clipped sine waveform



## Solder reflow profile



Drawing control: (Internal use only)  
Commodity code: 854370 90 99  
Issue number : 1  
Date : 11042016  
Internal reference : M6

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