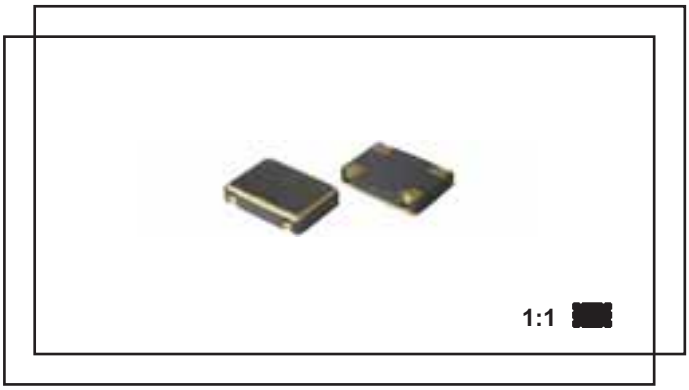
Type VV-U smd VCXO
smd ceramic package
(1.25 ~ 80.0)MHz



- # HCMOS / TTL compatible
- # (5.0 x 3.2)mm footprint
- # +1.8Vd.c. ~ +5.0Vd.c. supply options
- # RoHS compliant

Electrical specification

Case style	V: (5.0 x 3.2)mm, height 1.3mm	
Frequency range	(1.25 ~ 80.0)MHz	
Overall Stability *	±(15 ~ 50)ppm, temperature range dependent	
Pulling range (positive slope)	±(50 ~ 100)ppm min.	
Control voltage V_t	(+2.5 ±2.5)Vd.c., V_{cc} = +5.0Vd.c., (+1.65 ±1.65)Vd.c., V_{cc} = +3.3Vd.c.	
Supply current max.	(0.5 ~ 29)MHz	15mA
	(30 ~ 49)MHz	20mA
	(50 ~ 80)MHz	35mA
Rise and fall time max. **	(0.5 ~ 29)MHz	10ns
	(30 ~ 49)MHz	6ns
	(50 ~ 80)MHz	4ns
Operating temperature	(0 +70)°C ~ (-40 +85)°C	
Storage temperature	(-40 +85)°C	
Output	TTL 15pF, CMOS 15pF, CMOS 50pF	
Symmetry	(45 ~ 55)%, (40 ~ 60)%	
Ageing	±5ppm first year max.	

* inclusive of calibration tolerance at +25°C, temperature tolerance, supply voltage variation, load variation, first year ageing, shock and vibration.
** measured, with an output load of 15pF, between (10 ~ 90)% V_{cc}

Ordering information

Example .... type VV-U smd clock oscillator, 40.00MHz, ±100ppm pulling range, +3.3Vd.c., ±25ppm (-20 +70)°C, output CMOS 15pF, symmetry (45 ~ 55)%

TFC PART NUMBER .... VV 40.0M E U M H C J

'VV' .... type number: VV = smd clock oscillator type VV
'40.0M' .... frequency: 40.0M = 40.00MHz, frequency range from (1.25 ~ 80)MHz
'E' .... supply voltage: E = +(2.8 ~ 3.3)Vd.c., K = 1.8Vd.c., J = 2.5Vd.c., C = +5.0Vd.c.
'U' .... VCXO designator
'M' .... frequency stability: M = ±25ppm
'H' .... pulling range: H = ±100ppm
'C' .... temperature range: C = (-20 +70)°C
'J' .... output logic and symmetry: J = CMOS 15pF, (45 ~ 55)%

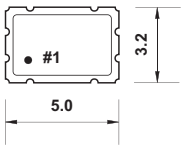
Frequency stability .... B*: ±15ppm, M: ±25ppm, P: ±50ppm
Pulling range .... P: ±50ppm, H: ±100ppm
Temperature range .... B*: (0 +70)°C, I: (-10 +60)°C, C: (-20 +70)°C, L: (-40 +85)°C
Output .... A: TTL 15pF (45 ~ 55)%, J: CMOS 15pF(45 ~ 55)%, F: CMOS 50pF(45 ~ 55)%,
B: TTL 15pF (40 ~ 60)%, K: CMOS 15pF(40 ~ 60)%, G: CMOS 50pF(40 ~ 60)%

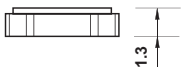
Telephone: +44 (0)1903 740000, Fax: +44 (0)1903 742208,
e-mail: sales@tfc.co.uk, url: www.tfc.co.uk

ISO9001: 2008
RS13124
ISO14001: 2004
EMS53965

Type VV-U

VV-U dimensions(mm) shown twice full size

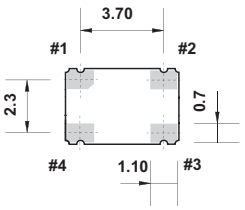


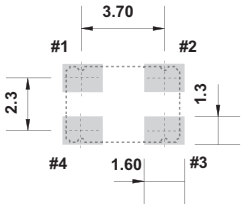


Suggested land pattern

Pads are gold, 2.5 min., over nickel, suitable for vapour phase or reflow soldering, preheat +150 C for 2 minutes, peak temperature +250 C for 30 seconds max.

Connect 0.01 F capacitor between Vcc and ground





Pads viewed from bottom

#1 voltage control
#2 ground
#3 output
#4 Vcc

Environmental test conditions (on request)

Mechanical shock	*1500g, half sine wave, 0.5ms, 3 directions*	*MIL STD 883D 2002.3, condition A*
Thermal shock	*(-55 ~ +125)°C, 20 cycles*	*MIL STD 883D 1011.9, condition B*
Vibration	*(10 ~ 2000)Hz, 1.25mm, sine wave, 20g, each of three planes, duration 4 hours*	*MIL STD 883D 2005.2, condition B*
Solderability	*+245°C ±5°C, 5 seconds ±0.5 seconds*	*MIL STD 883D 2003.7*
Fine leak	*Mass spectrometer leak rate less than 2^{10-8} atm.cc/sec. helium*	*MIL STD 883D 1014.9, condition A*
Gross leak	*Leak test in de-ionised water, vacuum 70cm/Hg*	
Humidity	*85% relative humidity, +85°C, 500 hours*	*JIS-C 7022 B-5, conditionC*

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