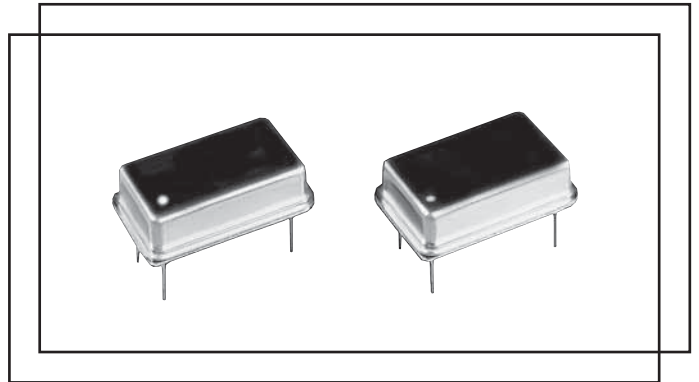


Type VF-W 4pin(14 pin DIL layout) (1.5 ~ 50)MHz

- # wide pulling range
- # good linearity
- # +3.3Vd.c., +5.0Vd.c. supply



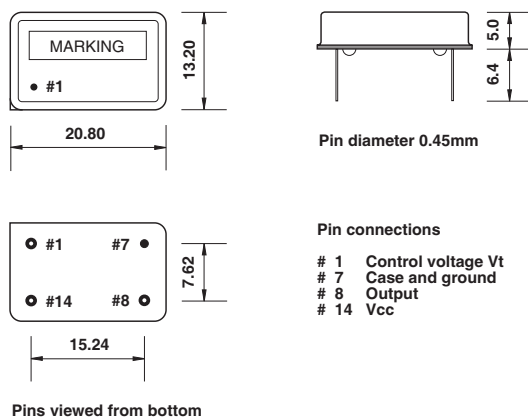
Electrical specification

Case style	4 pin(14 pin DIL layout): (20.8 x 13.2)mm, height 5.0mm		
Frequency range	(1.5 ~ 50)MHz		
Stability *	$\pm(25 \sim 50)$ ppm, temperature range dependent		
Pulling range	$\pm(100\text{ppm} \sim 200\text{ppm})$, customer specified		
Control voltage V_t	$(+2.5 \pm 2.0)$ Vd.c., $V_{cc} = +5.0$ Vd.c., $(+1.65 \pm 1.35)$ Vd.c., $V_{cc} = +3.3$ Vd.c.		
Supply voltage V_{cc}		+3.3Vd.c.	+5.0Vd.c.
Supply current max.	(1.5 ~ 20)MHz	20mA	30mA
	(20 ~ 50)MHz	30mA	40mA
Rise and fall time max. **	(1.5 ~ 20)MHz	8ns	8ns
	(20 ~ 50)MHz	5ns	5ns
Operating temperature	$(-20 +70)^\circ\text{C} \sim (-40 +85)^\circ\text{C}$		
Storage temperature	$(-55 +125)^\circ\text{C}$		
Output	TTL, CMOS		
Symmetry	(45 ~ 55)%, (40 ~ 60)%		
Ageing	± 5 ppm first year max.		

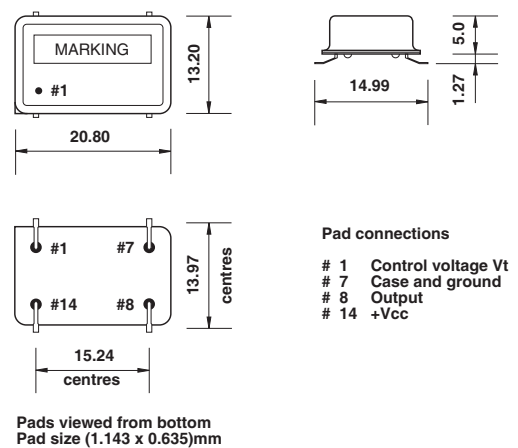
* inclusive of calibration tolerance at +25°C, temperature tolerance, supply voltage variation, load variation, first year ageing, shock and vibration.

** measured with an output load of 15pF, between (10 ~ 90)% V_{cc}

VF-W dimensions(mm), through hole



VF-W dimensions(mm), gull wing



Type VF-W

Ordering information

Example type VF-W vcxo oscillator, 40.00MHz, ± 25 ppm(-20 +70) $^{\circ}$ C frequency stability, ± 100 ppm pulling range, +3.3Vd.c., 14 pin DIL package, output CMOS 15pF, symmetry (45 ~ 55)%

TFC PART NUMBER VF 40.0M E W M C J

'VF' type number: VF = vcxo clock oscillator type VF-W

'40.0M' frequency: 40.0M = 40.00MHz, frequency range from (1.5 ~ 50)MHz

'E' supply voltage and package combination: E = +3.3Vd.c., 14 pin DIL through hole package

'W' VCXO designator

'M' frequency stability/pulling range combination: M = ± 25 ppm frequency stability, ± 100 ppm pulling range

'C' temperature range: C = (-20 +70) $^{\circ}$ C

'J' output logic and symmetry: J = CMOS 15pF, (45 ~ 55)%

Supply voltage and package combination

T: +5Vd.c., 14 pin DIL through hole
G: +5Vd.c., gull wing package
E: +3.3Vd.c., 14 pin DIL through hole
F: +3.3Vd.c., gull wing package

Frequency stability/pulling range combination	frequency stability	pulling range
M:	± 25 ppm	± 100 ppm
G:	± 35 ppm	± 100 ppm
P:	± 50 ppm	± 100 ppm
R:	± 50 ppm	± 150 ppm
T:	± 25 ppm	± 150 ppm
K:	± 50 ppm	± 200 ppm

Temperature range

C: (-20 +70) $^{\circ}$ C
D: (-30 +80) $^{\circ}$ C
L: (-40 +85) $^{\circ}$ C

Output logic and symmetry

A: TTL(45 ~ 55)%
B: TTL(40 ~ 60)%
R: TTL 50pF(40 ~ 60)%
E: TTL 50pF(45 ~ 55)%
J: CMOS 15pF(45 ~ 55)%
K: CMOS 15pF(40 ~ 60)%
F: CMOS 50pF(45 ~ 55)%
G: CMOS 50pF(40 ~ 60)%

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) $^{\circ}$ 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 $^{\circ}$ C $\pm 5^{\circ}$ 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 $^{\circ}$ C, 500 hours	JIS-C 7022 B-5, condition C