

A precision, miniature, low profile, smd crystal clock oscillator manufactured over the frequency range of (19 ~ 60)MHz. Tight symmetry, low jitter, low ageing, combined tolerance from $\pm 5\text{ppm}$.

A standard package for new designs and volume applications combining small size and tight tolerance over an extended temperature range.

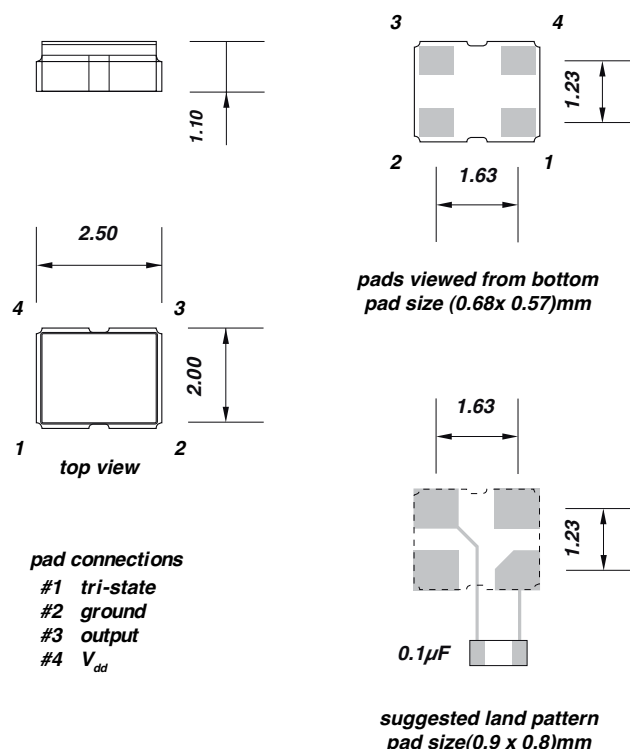
Supplied on tape and reel 1000, 2000, 3000, 5000 pieces per reel.

Frequency stability -vs- temperature:

temp. range	combined tolerance		
(-10 +60) $^{\circ}\text{C}$	$\pm 5\text{ppm}$	$\pm 10\text{ppm}$	$\pm 15\text{ppm}$
(-20 +70) $^{\circ}\text{C}$	$\pm 5\text{ppm}$	$\pm 10\text{ppm}$	$\pm 15\text{ppm}$
(-40 +85) $^{\circ}\text{C}$	-	$\pm 10\text{ppm}$	$\pm 15\text{ppm}$

Tolerance inclusive of calibration tolerance at +25 $^{\circ}\text{C}$, temperature tolerance, load variation and supply voltage variation, first year ageing, vibration and shock

Dimensions(mm)



Electrical specification:

	3.3Vd.c.		2.5Vd.c.		1.8Vd.c.		
	min.	max.	min.	max.	min.	max.	
supply voltage $\pm 10\%$	2.97	3.63	2.25	2.75	1.62	1.98	Vd.c.
frequency range	(19 ~ 60)MHz						MHz
supply current	-	10	-	7	-	5	mA
duty cycle	45% ~ 55%						%
CMOS o/p high	90% V_{DD}	-	90% V_{DD}	-	90% V_{DD}	-	V
CMOS o/p low	-	10% V_{DD}	-	10% V_{DD}	-	10% V_{DD}	V
rise and fall times	-	8	-	8	-	8	nano sec.
start up time	-	5	-	5	-	5	milli sec.
tri-state: active o/p	0.7 V_{DD}	-	0.7 V_{DD}	-	0.7 V_{DD}	-	V
tri-state: high impedance o/p	-	0.3 V_{DD}	-	0.3 V_{DD}	-	0.3 V_{DD}	V
RMS phase jitter(12kHz ~ 20MHz)	-	1	-	1	-	1	pico sec.
phase noise at 26MHz: 10Hz	-	-80	-	-80	-	-80	dBc/Hz
100Hz	-	-110	-	-110	-	-110	dBc/Hz
1kHz	-	-130	-	-130	-	-130	dBc/Hz
10kHz	-	-145	-	-145	-	-145	dBc/Hz
ageing max. @25 $^{\circ}\text{C}$, first year	-	± 1	-	± 1	-	± 1	ppm
storage temp. range	-55	+125	-55	+125	-55	+125	$^{\circ}\text{C}$

Ordering information

EXAMPLE	<i>type OY-A clock oscillator, 40.00MHz, ±10ppm(-40 +85)°C, +3.3Vd.c., output CMOS</i>
TFC PART NUMBER	OYA 40.0M E B L
OYA	<i>type: OY-A = clock oscillator type OY-A, smd</i>
40.0M	<i>frequency: 40.0M = frequency in MHz, frequency range (19 ~ 60)MHz</i>
E	<i>supply voltage: E = +3.3Vd.c.,</i>
B	<i>frequency stability: B = ±10ppm</i>
L	<i>temperature range: L = (-40 +85)°C</i>
OPTIONS	
supply voltage	<i>K = 1.8Vd.c., J = 2.5Vd.c., E = +3.3Vd.c.</i>
frequency stability	<i>A = ±5ppm, B = ±10ppm, P = ±15ppm</i>
temperature range	<i>I = (-10 +60)°C, C = (-20 +70)°C, L = (-40 +85)°C</i>