type OY-U smd clock oscillator (2.5 x 2.0)mm

April 19th 2016

A miniature, low profile, smd crystal clock oscillator manufactured over the frequency range of 20MHz to 60MHz. Tight symmetry, low jitter, low ageing, combined tolerance from ±20ppm. Extended temperature range (-40 ~ 105)°C.

Designed specificaflly for ultra low phase noise and Hi-resolution audio(HiFi and HD audio).

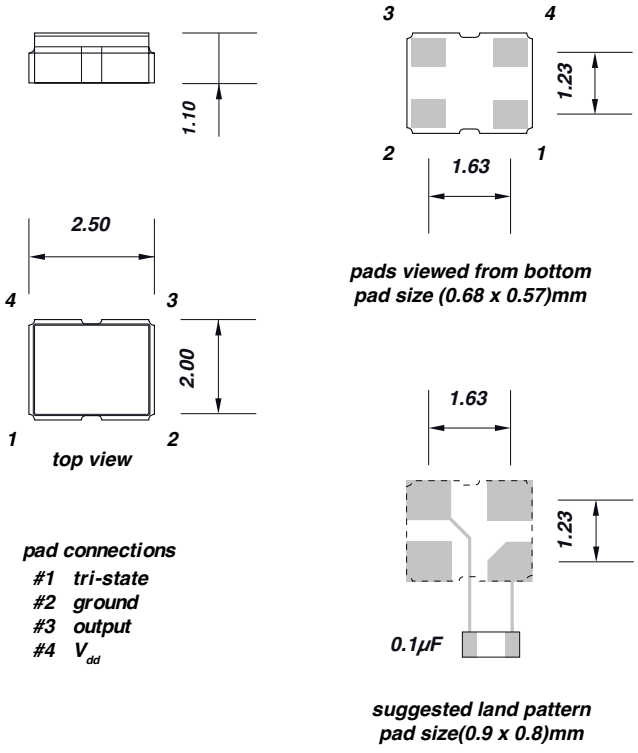
Supplied on tape and reel 1000, 2000, 3000, 5000 pieces per reel.

Frequency stability -vs- temperature:

temp. range	combined tolerance			
(-10 +60)°C	±20ppm	±25ppm	±30ppm	±50ppm
(-20 +70)°C		±25ppm	±30ppm	±50ppm
(-40 +85)°C		±25ppm	±30ppm	±50ppm
(-40 +105)°C				±50ppm

Tolerance inclusive of calibration tolerance at +25°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 ±10%		2.97	3.63	2.25	2.75	1.62	1.98	Vd.c.
frequency range		(20 ~ 60)MHz						MHz
standard frequencies		45.1584, 49.1520						MHz
supply current		-	8	-	7	-	5	mA
duty cycle		45% ~ 55%						%
CMOS logic 1		2.97		2.25		1.62		V
CMOS logic 0			0.33		0.25		0.18	V
Rise and fall time t_r		-	6	-	6	-	6	nano sec.
start up time			2		2		2	milli sec.
tri-state pin #1: enable (high voltage or floating)		2.31	-	1.75	-	1.26	-	V
tri-state pin #1: disable low voltage or ground		-	0.99	-	0.75	-	0.54	V
RMS phase jitter (integrated 12kHz ~ 20MHz)		-	0.5	-	0.5	-	0.5	pico sec
1st year aging @ +25 °C		-	±3	-	±3	-	±3	ppm
storage temp		(-55 ~ +125)						°C
typical phase noise		f = 20MHz		f = 40MHz		f = 60MHz		
1.8Vd.c., +25°C	+1kHz	-147		-143		-139		dBc/Hz
	+100kHz	-156		-154		-150		dBc/Hz
3.3Vd.c., +25°C	+1kHz	-151		-148		-142		dBc/Hz
	+100kHz	-157		-156		-156		dBc/Hz

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Ordering information

EXAMPLE	type OY-U clock oscillator, 40.00MHz, ±30ppm(-40 +85)°C, +3.3Vd.c., output CMOS
TFC PART NUMBER	**OYU 40.0M E E L**
OYU	type: OYU = clock oscillator type OY-U, smd
40.0M	frequency: 40.0M = frequency in MHz, frequency range (20 ~ 60)MHz
E	supply voltage: E = +3.3Vd.c.,
E	frequency stability: E = ±30ppm
L	temperature range: L = (-40 +85)°C
OPTIONS	
supply voltage	K = 1.8Vd.c., J = 2.5Vd.c., E: +3.3Vd.c.
frequency stability	C: ±20ppm , D: ±25ppm, E: ±30ppm, G: = ±50ppm
temperature range	I: (-10 +60)°C, C: (-20 +70)°C , L: (-40 +85)°C, H: (-40 +105)°C

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