

- ▶ 1.8V or 2.5V Versions
- ▶ 3.2 x 5 mm Footprint
- ▶ Extended Temp Range Option
- ▶ Pb Free/RoHS Compliant

ECS-3518/3525

SMD CLOCK OSCILLATOR

ECS-3518 (1.8V) and ECS-3525 (2.5V) subminiature SMD oscillators, ideal for today's high density applications.

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-3518 (+1.8V)			ECS-3525 (+2.5V)			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
Frequency Range		1.544		125.0	1.544		125.0	MHz
Operating Temperature	Standard	0		+70			+70	°C
	Extended (N Option)	-40		+85	-40		+85	°C
Storage Temperature		-55		+125	-55		+125	°C
Supply Voltage	VDD	+1.62	+1.8	+1.98	+2.25	+2.5	+2.75	VDC
Frequency Stability *	Option A			± 100			± 100	ppm
	Option B			± 50			± 50	ppm
	Option C			± 25			± 25	ppm
Input Current	1.544 to 9.999 MHz			6			7	mA
	10.000 to 34.999 MHz			7			8	mA
	35.000 to 49.999 MHz			15			20	mA
	50.000 to 125.000 MHz			25			30	mA
Output Symmetry	@ 50% Vcc level			40/60			40/60	%
	@ 50% Vcc level (T Option)			45/55			45/55	%
Rise and Fall Times	10% VDD to 90% level			5			6	ns
"0" level	VOL			Vcc *10%			Vcc *10%	VDC
"1" level	VOH	Vcc *90%			Vcc *90%			VDC
Output Load	HCMOS			30			30	pF
Startup time				10			10	ms

* Note: Inclusive of 25°C tolerance, operating temperature range, input voltage change, load change, aging, shock and vibration.

DIMENSIONS (mm)

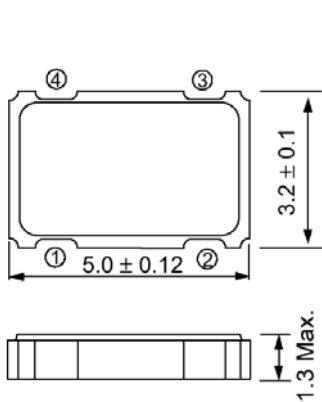


Figure 1) Top, Side and Bottom views

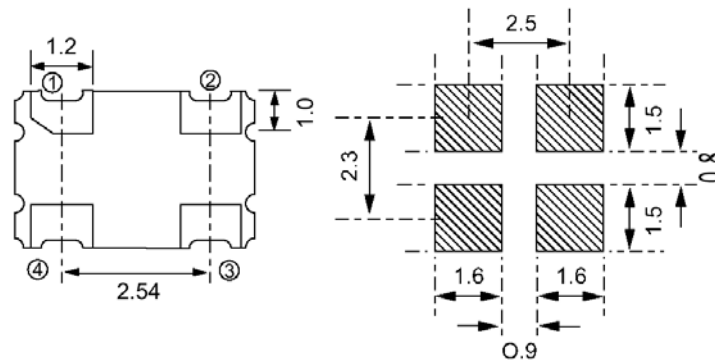


Figure 2) Suggested Land Pattern

Pad Connections	
Pad #1	Tri-State
Pad #2	Ground
Pad #3	Output
Pad #4	Vcc

Tri-State Control Voltage	
Pad 1	Pad 3
Open	Oscillation
1 Level	Oscillation
0 Level	High Impedance

PART NUMBERING GUIDE: Example ECS-3525-200-AN

ECS	Series	Frequency Abbreviation	Stability	Temperature
	3518 = +1.8V 3525 = +2.5V	200 = 20.000 MHz See Frequency Abbreviations (Pg 2)	A = ± 100 ppm B = ± 50 ppm C = ± 25 ppm	Blank = 0 ~ +70°C M = -20 ~ +70°C N = -40 ~ +85°C

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Frequency Abbreviations

FREQUENCY MHz	CODE
4.000	040
8.000	080
10.000	100
12.000	120
14.31818	143
24.000	240
32.000	320
33.333	333
40.000	400
48.000	480
50.000	500
60.000	600
64.000	640
66.666	666
80.000	800
100.000	1000
125.000	1250



Figure 1) Suggested Reflow Profile

TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
5.25	3.45	12.0	5.5	8.0	2.0	0.3	1.8	178	1000 pcs

Figure 2) Pocket Tape Dimensions

Package Data	
Item	Description
Lid	Metal
Base	Ceramic
Sealing	Seam Weld
Terminal	Tungsten (metalized)
Plating	Gold/Nickel (Surface)/(Under)
RoHS	Compliant (Pb Free)
MSL	1