RoHS COMPLIANT

ECS-2018

SMD Clock Oscillator

ECS-2018 (1.8V) subminiature SMD oscillators. Ideal for today's high density applications.

Request a Sample

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

ECS-2018

- Low Voltage HCMOS
- 2.5 x 2.0 mm Footprint
- Low Current Consumption
- PbFree/RoHS Compliant

Parameters	Conditions	ECS-2018 (+1.8V)			Units
		MIN	TYP	MAX	
Frequency Range		0.750		50.000	MHz
Operating Temperature	Standard	-10		+70	°C
	Extended (N Option)	-40		+85	°C
Storage Temperature		-55		+100	°C
Input Voltage	VDD	+1.71	+1.80	+1.89	VDC
Frequency Stability*	Option A			±100	PPM
	Option B			±50	PPM
	Option C			±25	PPM
Input Current	0.75 ~ 30.000 MHz			2.5	mA
	30.1 ~ 40.000 MHz			3.0	mA
	40.1 ~ 50.000 MHz			3.5	mA
Stand-by Current	Pin 1 = VIL			10	µA
Output Symmetry	@50% VDD Level			45/55	%
Rise and Fall Times	10% VDD to 90% Level			10	ns
"0" Level	VOL			10% VDD	VDC
"1" Level	VOH	90% VDD			VDC
Output Load	CMOS			15	pF
Disable Delay				150	ns
Startup Time				10	ms
Aging				±5	PPM

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

Part Numbering Guide: Example ECS-2018-200-BN-TR

ECS -	Series -	Frequency Abbreviations -	Stability Tolerance -	Temperature -	Packaging
ECS	2018 = +1.8V	200 = 20 MHz	A = ±100 ppm B = ±50 ppm C = ±25 ppm	Blank = -10 ~ 70°C M = -20 ~ +70°C N = -40 ~ +85°C	TR = Tape & Reel 1K/Reel

ECS-2018
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Package Dimensions (mm)

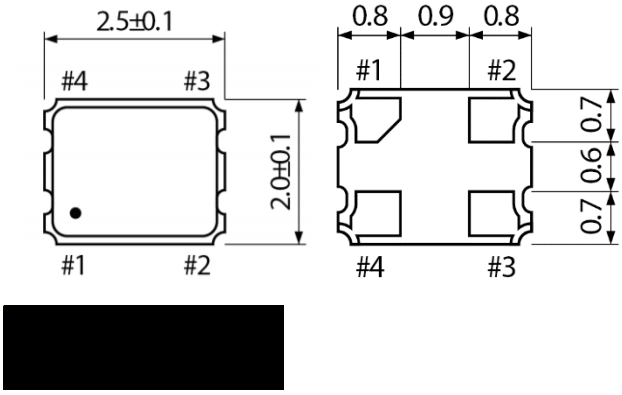

Figure 1) *Top, Side, and Bottom views*

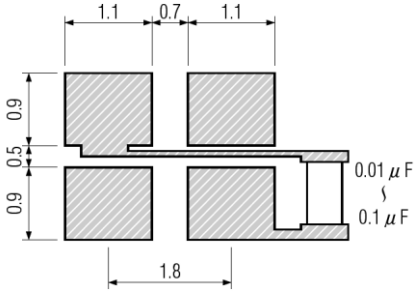

Figure 2) *Land Pattern*

Pin Connections	
#1	Tri-State
#2	Ground
#3	Output
#4	VDD

Tri-State Control Voltage	
Pad 1	Pad 3
Open	Oscillation
VIH 70% VDD Min.	Oscillation
VIL 30% VDD Max.	No Oscillation

Note: Internal crystal oscillation to be halted (Pin #1=VIL)

Tape Dimensions (mm)

Figure 3) *Pocket Tape Dimensions*

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

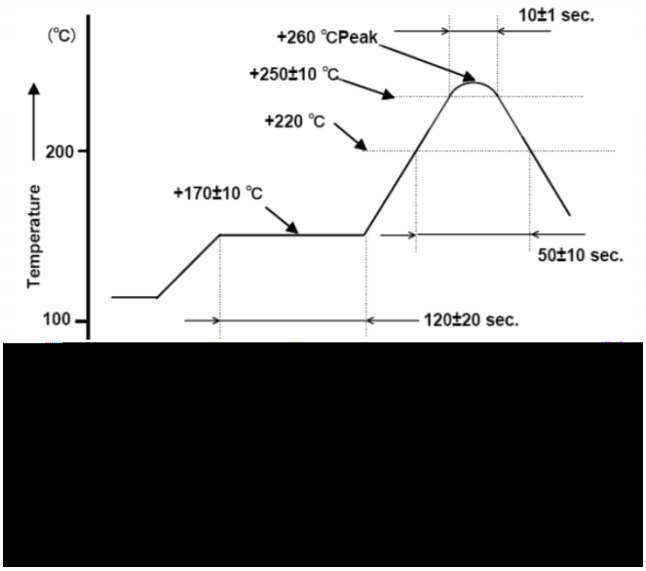

Figure 4) *Suggested Reflow Profile*