

ECS-1618 (1.8V) subminiature SMD oscillators. Ideal for today's high density applications.

Request a Sample

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



- RoHS Compliant
- MSL 1
- Lead Finish Au

Parameters	Conditions	ECS-1618 (+1.8V)			Units
		MIN	TYP	MAX	
<b>Frequency Range</b>		1.500		80.000	MHz
<b>Operating Temperature</b>	Standard	-10		+70	°C
	Extended (N Option)	-40		+85	°C
<b>Storage Temperature</b>		-55		+100	°C
<b>Input Voltage</b>	VDD	+1.71	+1.80	+1.89	VDC
<b>Frequency Stability*</b>	Option A			±100	PPM
	Option B			±50	PPM
	Option C			±25	PPM
<b>Input Current</b>	1.500 ~ 19.90 MHz			2.5	mA
	20.0 ~ 39.9 MHz			3.0	mA
	40.0 ~ 49.9 MHz			3.5	mA
	50.0 ~ 80.0 MHz			6.5	mA
<b>Stand-by Current</b>	Pin 1 = VIL			10	µA
<b>Output Symmetry</b>	@50% VDD Level			45/55	%
<b>Rise and Fall Times</b>	10% VDD to 90% Level			10	ns
<b>"0" Level</b>	VOL			10% VDD	VDC
<b>"1" Level</b>	VOH	90% VDD			VDC
<b>Output Load</b>	CMOS			15	pF
<b>Disable Delay</b>				150	ns
<b>Startup Time</b>				10	ms
<b>Aging</b>				±5	PPM

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

### Part Numbering Guide: Example ECS-1618-200-BN-TR

ECS - Series - Frequency Abbreviations - Stability Tolerance - Temperature - Packaging

ECS

1618 = +1.8V

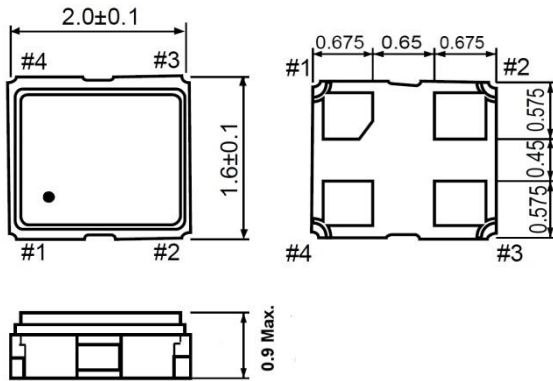
200 = 20 MHz

A = ±100 ppm  
B = ±50 ppm  
C = ±25 ppm

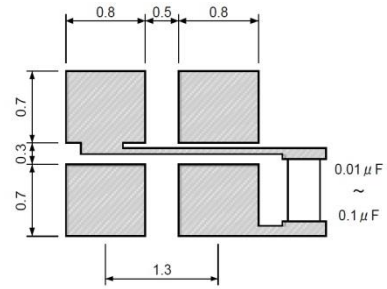
Blank = -10 ~ 70°C  
M = -20 ~ +70°C  
N = -40 ~ +85°C

TR = Tape & Reel

**Package Dimensions (mm)**



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



*Figure 2) Land Pattern*

Pin Connections	
#1	Tri-State
#2	Ground
#3	Output
#4	V <sub>DD</sub>

Tri-State Control Voltage	
Pad 1	Pad 3
Open	Oscillation
V <sub>IH</sub> 70% V <sub>DD</sub> Min.	Oscillation
V <sub>IL</sub> 30% V <sub>DD</sub> Max.	No Oscillation

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