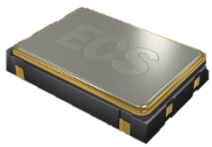


ECS-3961 (5V) and ECS-3963 (3.3V) miniature SMD crystal controlled oscillators. Package is seam welded with a metal lid.

[Request a Sample](#)

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

ECS-3961/3963



- 3.3 or 5.0V version
- 3.2 x 5 mm Footprint
- Low Current Consumption
- PbFree/RoHS Compliant

Parameters	Conditions	ECS-3961 (+5V)			ECS-3963 (+3.3V)			Units
		MIN	TYP	MAX	MIN	TYP	MAX	
Frequency Range		1.544		125.000	1.000		125.000	MHz
Operating Temperature	Standard	-10		+70	-10		+70	°C
	Extended (N Option)	-40		+85	-40		+85	°C
Storage Temperature		-55		+125	-55		+125	°C
Supply Voltage		+4.5	+5.0	+5.5	+2.7	+3.3	+3.6	VDC
Frequency Stability*	Option A			±100			±100	PPM
	Option B			±50			±50	PPM
	Option C			±25			±25	PPM
Input Current	1.544 ~ 9.999 MHz			15			8	mA
	10.0 ~ 34.999 MHz			20			10	mA
	35.0 ~ 49.999 MHz			35			25	mA
	50.0 ~ 125 MHz			40			35	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			5	ns
"0" Level	VOL			10% VDD			10% VDD	VDC
"1" Level	VOH	90% VDD			90% VDD			VDC
Output Load	HCMOS			30			15	pF
Startup Time				10			10	ms

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

Part Numbering Guide: Example ECS-3963-200-BN-TR

ECS	Series	Frequency Abbreviations	Stability Tolerance	Temperature	Symmetry	Packaging
ECS	3961 +5V 3963 +3.3V	200 = 20 MHz	A = ±100 ppm B = ±50 ppm C = ±25 ppm	Blank = -10 ~ 70°C M = -20 ~ +70°C N = -40 ~ +85°C U = -55 ~ +125°C	Blank = 40/60 T = 45/55	TR = Tape & Reel 1K/Reel

Package Dimensions (mm)

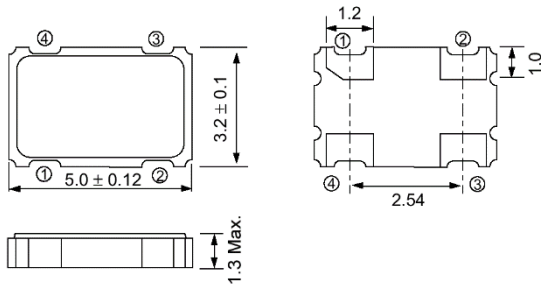


Figure 1) Top, Side, and Bottom views

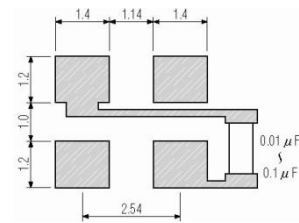
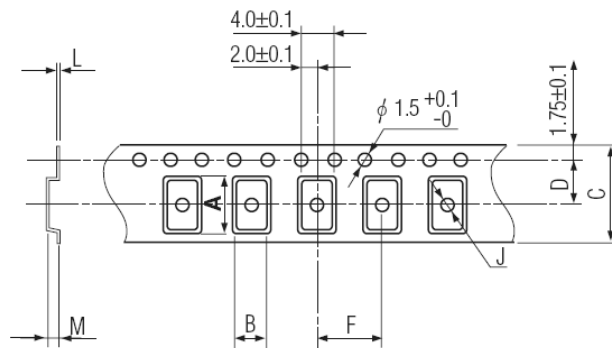


Figure 2) Land Pattern

Pin Connections	
#1	Tri-State**
#2	Ground
#3	Output
#4	V _{DD}

** Note: Internal pullup resistor from pin 1 to 4 allows active output if pin 1 is left open.

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



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	1000pcs

Figure 3) Tape Specifications

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View ECS-3961-200-AU-TR on WIN SOURCE](#)

 [ECS Inc. Information](#)

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-  Obsolete Management
-  Cost Control Management
-  Shortage Management
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-  Excess Inventory Management