

# ECS-3951C/3953C

## SMD Clock Oscillator

The ECS-3951C (5V) and ECS-3953C (3.3V) miniature SMD crystal controlled, low current clock oscillator in an all ceramic SMD package.

[Request a Sample](#)

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

#### ECS-3951C/3953C

Parameters	Conditions	ECS-3951C (+5V)			ECS-3953C (+3.3V)			Units
		MIN	TYP	MAX	MIN	TYP	MAX	
<b>Frequency Range</b>		1.000		80.000	1.000		125.000	MHz
<b>Operating Temperature</b>	Standard	0		+70	0		+70	°C
	Extended (N Option)	-40		+85	-40		+85	°C
<b>Storage Temperature</b>		-55		+125	-55		+125	°C
<b>Supply Voltage</b>		+4.5	+5.0	+5.5	+3.0	+3.3	+3.6	VDC
<b>Frequency Stability*</b>	Standard			±100			±100	PPM
	Option B			±50			±50	PPM
	Option C			±25			±25	PPM
<b>Input Current</b>	1.8 ~ 30.0 MHz			10			8	mA
	30.1 ~ 35.0 MHz			15			8	mA
	35.1 ~ 50.0 MHz			30			12	mA
	50.1 ~ 66.0 MHz			30			15	mA
	66.1 ~ 80.0 MHz			50			30	%
<b>Output Symmetry</b>	@50% VDD Level			40/60			40/60	%
<b>Rise and Fall Times</b>	10% VDD to 90% Level			10			15	ns
<b>"0" Level</b>	VOL			10%* VCC			10%* VCC	VDC
<b>"1" Level</b>	VOH	90%* VCC			90%* VCC			VDC
<b>Output Load</b>	HCMOS			15			15	pF
<b>Startup Time</b>	1.8 ~ 36.0 MHz			5			5	ms
	36.1 ~ 80.0 MHz			10			10	ms
<b>Output Current</b>	VOL=0.5V/0.33V			4			4	mA
	VOL=4.5V/2.97V			-4			-4	mA
<b>Enable/Disable Time</b>				100			150	ns

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

### Part Numbering Guide: Example ECS-3951C-500-B-TR

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

ECS

3951C +5V  
3953C +3.3V

500 = 50 MHz

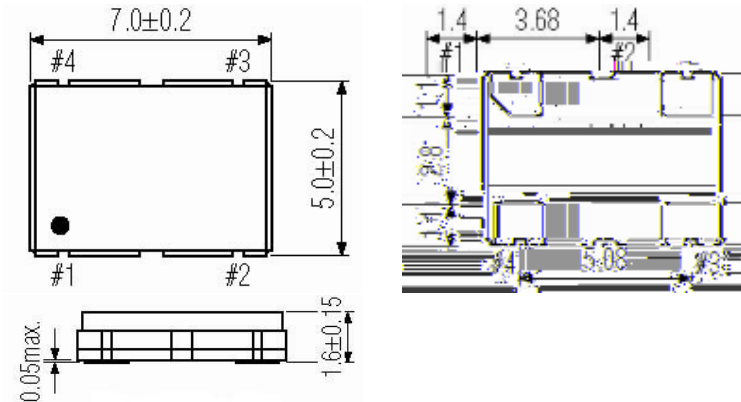
Blank = ±100 ppm  
B = ±50 ppm  
C = ±25 ppm

Blank = 0 ~ 70°C  
M = -20 ~ +70°C  
N = -40 ~ +85°C

TR = Tape & Reel  
1K/Reel

- 3.3 or 5.0V version
- 5 x 7 mm Footprint
- Low Power Consumption
- RoHS Compliant (Note 7 Exemption)

### Package Dimensions (mm)



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

**Figure 2) Land Pattern**

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

Tri-State Control Voltage	
Pad 1	Pad 3
Open	Oscillation
VCC x 0.9 Min.	Oscillation
VCC x 0.1 Max.	No Oscillation

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

ECS-3953C is also compatible with a supply voltage of +3.0V DC ±0.3V