RADITEK INC.

Synchronized Crystal Oscillators

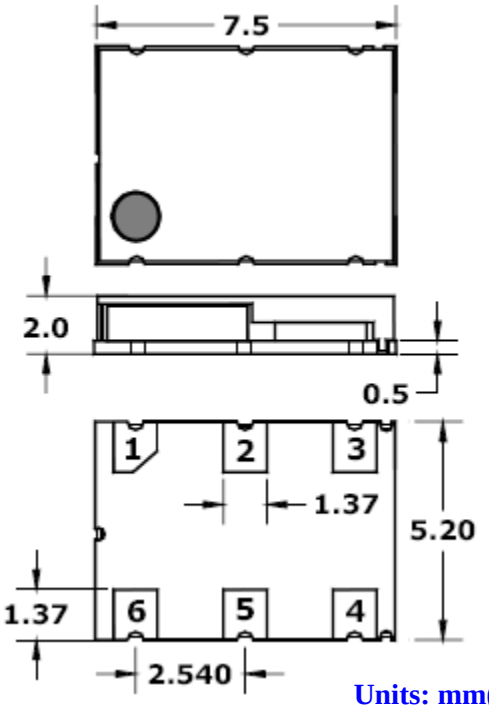
code-v4

RSYXO Series, 25-160MHz

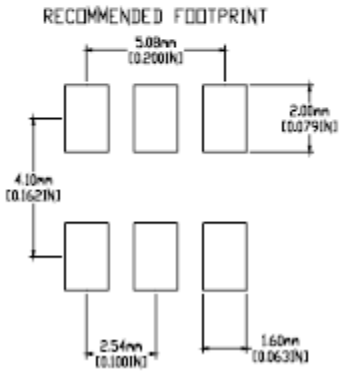
For use in systems which requires multiple clocks in different nodes of the system to run synchronously in frequency without master clock

FEATURES:

- Synchronize many low cost Crystal oscillators with 2 bus lines
- Acts like a giant distributed Crystal oscillator
- Ideal to synchronize many computer blades using 2 bus lines
- No Master clock
- No single point of failure
- No start up problems
- Any noise on the bus gets cleaned up by each recursive SYXO
- Phase Noise and Jitter is as good as the best SYXO in the network giving systen wide redundancy, gives N:1 protection
- Phase noise actually reduces as more SYXO's are added
- All units have identical phase noise



PIN OUT
Pin 1=Input
Pin 2=Optional EN/DIS or N/C
Pin 3=GND
Pin 4=Output
Pin 5= Complementary Output
Pin 6= Vcc



Units: mm(Inch)
Not to scale

Creating a Part Number

RSYXO- XXXM -A - X X - R

Frequency Range
25-160MHz

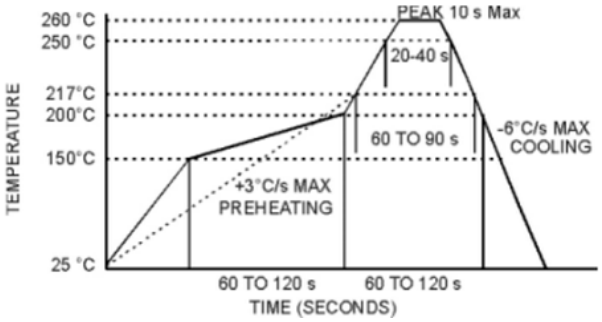
Operating Voltage
A 3.3 V ± 5%

Enable Option
L Enable Low
N N/C

Output Option
P PECL
L LVDS
H HCSL

Environmental
R RoHS compliant

Max Reflow Profile



Environmental and Mechanical Characteristics	
Operating temp. Range	-40ºC to 85ºC
Mechanical Shock	Per MIL-STD-202, Method 213, Cond. A
Thermal Shock	Per MIL-STD-883, Method 1011, Cond. A
Vibration	Per MIL-STD-883, Method 2007, Cond. A
Soldering conditions	See Max reflow profile

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ROHS Compliant

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Absolute Maximum Ratings			
Parameter	**Symbol**	**Value**	**Unit**
Operating Temperature Range	To	-40 to +85	ºC
Storage Temperature Range	Tst	-50 to +90	ºC
Supply Voltage	Vcc	-0.5 to 3.6	V
Enable/Disable Voltage	Ven/dis	0 to Vcc	V
Input Voltage Amplitude	Vin	Vcc	V

Electrical Parameters							
Parameter		**Symb**	**Conditions, Note**	**MIN**	**TYP**	**MAX**	**Unit**
Nominal Frequency, Differential Outputs		Fo		25		160	MHz
Supply Voltage		Vcc		3.135	3.3	3.465	V
Supply current		Icc	Loaded both outputs, 100 MHz		40	60	mA
LVDS OUTPUT	Load		At receiving end between the outputs	90	100	110	Ohm
	Output Levels	Vod	Differential amplitude	247	330	454	mV
			Amplitude error			50	mV
		Vof	Offset Voltage	1.125	1.25	1.375	V
			Offset voltage error			50	mV
	Duty Cycle (Symmetry)		At outputs crossing, room temperature	45/55	50/50	55/45	%
	Rise/Fall Time	Tr/Tf	20 to 80, 80 to 20 %		0.3	0.5	ns
LVPECL OUTPUT	Load		Output to Vcc-2V, or Thevenin Equivalent		50		Ohm
	Output Levels	Voh Vol	overall	Vcc-1.025		Vcc-1.620	V
	Duty Cycle		At 50% of output	45/55	50/50	55/45	%
	(Symmetry)		voltage swing				
	Rise/Fall Time	Tr/Tf	20 to 80, 80 to 20 %		0.3	0.5	ns
HCSL OUTPUT	Load		At receiving end each output, Rs = 0 Ohm		50		Ohm
	Output Levels	Voh	Output High 1,2	600	700	850	mV
		Vol	Output Low 1,2	-150	0	150	V
		Vcr	Crossing Point	250	350	550	mV
	Duty Cycle (Symmetry)		At outputs crossing, room temperature	45/55	50/50	55/45	%
	Rise/Fall Time	Tr/Tf	From 0.175 to 0.525 V		0.35	0.5	ns
Input signal		Vin	Peak-to-peak	1.0		Vcc	V
Enable			Pin 2 = Low, 0 to Vcc-1.62 V, or floating	Enabled			V
Disable, see note1.			Pin 2 = High, Vcc-1.025 V to Vcc	Disabled, Pin4 = Logic "1", Pin5 = Logic "0"			V
Skew			Unit to unit			2	Degrees

Notes: 1. En/Dis is not available with LVDS output. Please contact factory on different polarity of En/Dis control.

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