

RoHS Compliant Pb - Lead Free	Ltr	Revisions	Date	Appr

**Electrical Specifications:**

Frequency Range		77.000 to 625.000		MHz
Frequency Stability over Temperature		±100		PPM Max
		±50		
		±25		
Aging per Year		±3		
Operating Temperature Range	Standard	0 to +70		°C
	Extended	-40 to +85		
Storage Temperature Range		-55 to +125		
Supply Voltage		2.5 ± 5%	3.3 ± 5%	Vdd
Input Current	77.000 to 100.000 MHz	60	60	mA Max
	101.000 to 160.000 MHz	65	65	
	161.000 to 625.000 MHz	100	110	
Output Voltage	Logic High (Voh)	1.6	1.6	Vdd Min
	Logic Low (Vol)	0.9	0.9	Vdd Max
Differential Output Voltage (Vod)		247 to 454		mV
Offset Voltage (Vos)		1.125 to 1.375		V
Output Symmetry		45 to 55		%
Output Type		LVDS - Complimentary Output		-
Output Load (Between Q and QN)		100		Ω
Rise and Fall Time	77.000 to 100.000 MHz	1	1	ns Max
	101.000 to 160.000 MHz	0.5	0.5	
	161.000 to 625.000 MHz	1.5	1.5	
Enable-Disable Function	Tri-State			-
	INH - Pin 1	Q Pin 4 - QN Pin 5		-
	High - Pin 1	Operating		-
	Low - Pin 1	High Impedance		-
Enable High Input Voltage		1.75	2.31	Vdd Min
Enable Low Input Voltage		0.75	0.99	Vdd Max
Phase Jitter (12 KHz to 20 MHz)	77.000 to 159.900 MHz	1		ps RMS
	160.000 to 625.000 MHz	4		

Temperature stability is Inclusive of all conditions:

Calibration Tolerance at +25°C, frequency stability over the operating temperature range, supply voltage, supply voltage change, output load changes, shock, vibration, and 1st year aging at +25°C.



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All dimensions are millimeters.

CAD: TCR

Review: EG

Appr: MK

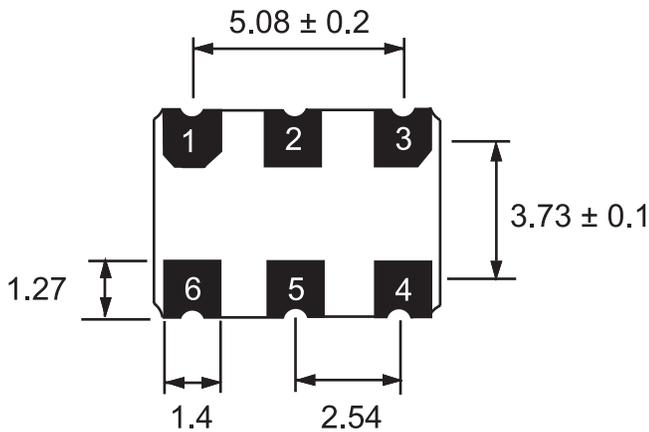
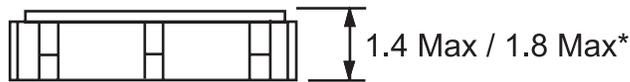
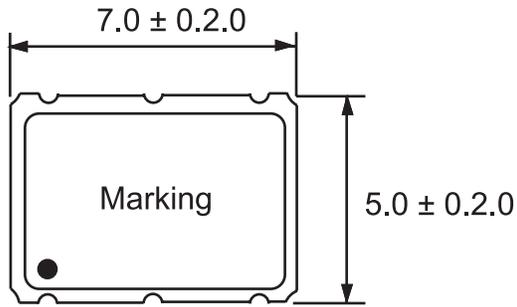
Page: 1/4 Date: Sept 6, 2007

Specification Title:

**Clock Oscillator  
LVDS - Complimentary Output  
5.0 x 7.0 mm Surface Mount - 6 Pad  
General Product Specification**

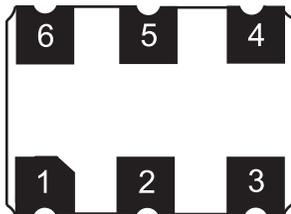
Part Number: **S7A Series**

### Mechanical Outline:



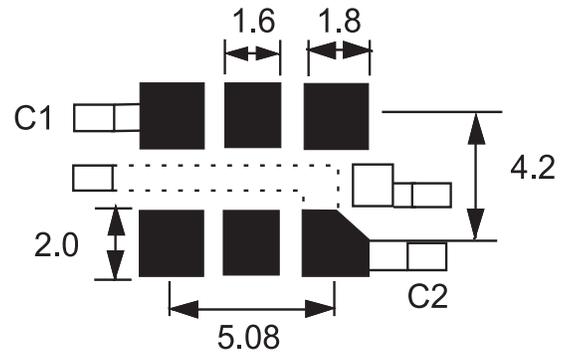
**Package is Seam Sealed Ceramic-Metal.  
Dimensions are millimeters.**

### Pad Connection:



**Top View**

### Solder Pattern:



C1: 0.01  $\mu$ F or 0.1  $\mu$ F decoupling capacitor is recommended.

C2: By-Pass capacitor for noise suppression. Contact Aker for suggested values.

\*Package Height:

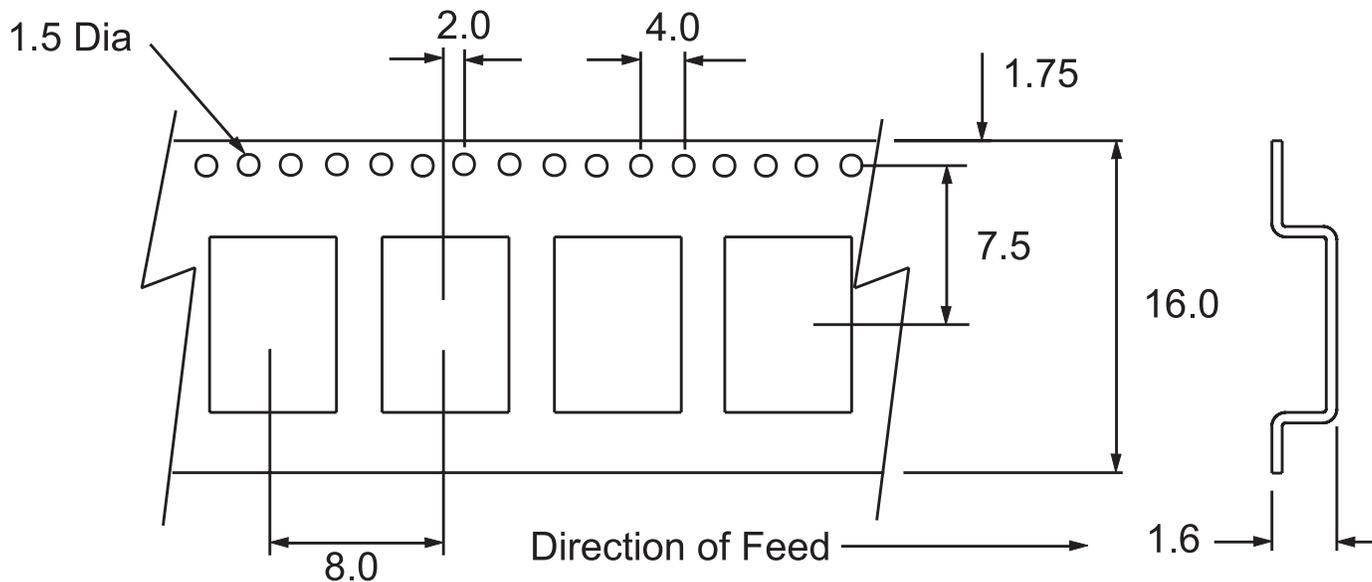
1.4 mm Max for 77 to 159.900 MHz

1.8 mm Max for 160 to 625 MHz

### Pin Connection

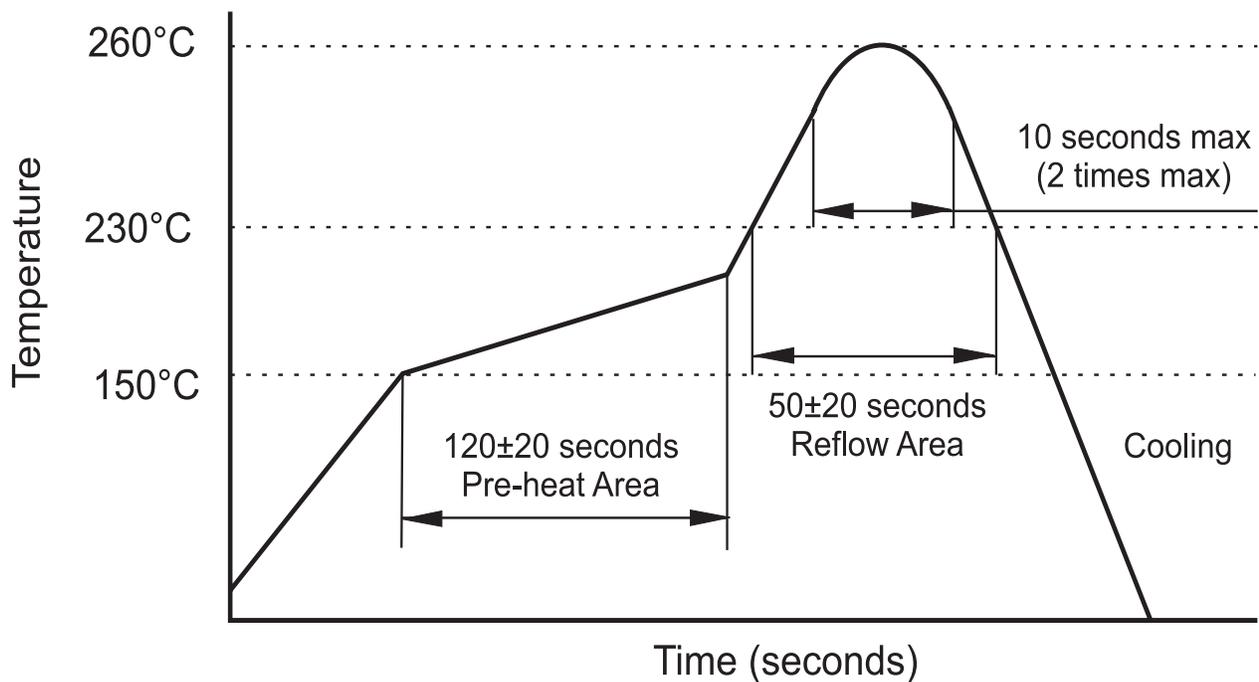
- 1- INH
- 2- NC
- 3- GND
- 4- Output - Q
- 5- Comp. Output - QN
- 6- Vdd

**Carrier Tape Dimensions:**



**Dimensions are millimeters.**

**Solder Reflow Characteristics:**



## How to build a Part Number:

<b>Series</b>	<b>S</b>	<b>Parameter</b>
<b>Package</b>	<b>7A</b>	<b>5.0 x 7.0 mm - 6 Pad</b>
<b>Supply Voltage</b>	<b>25</b>	<b>+2.5 Vdd ± 5%</b>
	<b>33</b>	<b>+3.3 Vdd ± 5%</b>
<b>Temperature Stability</b>	<b>10</b>	<b>±100 PPM</b>
	<b>05</b>	<b>±50 PPM</b>
	<b>025</b>	<b>±25 PPM</b>
<b>Frequency</b>	<b>77.000 to 625.000</b>	<b>MHz</b>
<b>Output Load</b>	<b>L</b>	<b>LVDS</b>
<b>Temperature Range</b>	<b>See Notes</b>	<b>0 to +70 °C</b>
	<b>X</b>	<b>-40 to +85 °C</b>
<b>Packaging</b>	<b>R</b>	<b>Tape and Reel</b>

### Part Number Example:

**S7A3305-155.520-L-X-R**

**S7A:** 5.0 x 7.0 mm SMD Package - 6 Pad

**33:** +3.3 Vdd Supply Voltage

**05:** ±50 PPM Temperature Stability

**155.520** MHz Nominal Frequency

**L:** LVDS Output

**X:** -40 to + 85° C Extended Temperature Range

**R:** Tape and Reel Packaging

### Notes:

- 1- Standard Temperature Range does not need to be included in Part Number description.
- 2- Product is shipped in Tape and Reel configuration. Each reel contains 1000 pieces.
- 3- Quantities less than 1000 are shipped bulk in ESD pouches.
- 4- Specification subject to change without notice.