



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Programmable - High Performance SMD Crystal Oscillator

ASG-C Series

Moisture Sensitivity Level (MSL) - This product is Hermetically Sealed and not Moisture Sensitive; therefore MSL = N/A (Not Applicable)



RoHS
Compliant



7.0 x 5.0 x 2.0mm

FEATURES:

- ASG series is a High Performance crystal based oscillator; available either as an XO or a VCXO
- Frequency range from 10MHz to 250MHz with LVCMOS output
- Available from 10MHz to 1.50GHz with LVDS or LVPECL output
- Offered with either 2.50V or 3.30V bias voltage
- Quick turn, 1~5 business days for small quantity orders

APPLICATIONS:

- Networking, SONET/SDH
- WiMax / WLAN
- Computing
- Phase Locked Loops
- Direct Digital Synthesis (DDS)
- DSL/ADSL
- Base Terminal Stations

STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes	
Frequency Range:	V _{dd} = 3.3V	10	250	MHz		
	V _{dd} = 2.5V	10	250	MHz		
Operating Temperature:	-40		+85	°C		
Storage Temperature:	-55		+125	°C		
Overall Frequency Stability:	-50		+50	ppm	<i>See Note # 1</i>	
Initial Set Tolerance	-5.00	≤ ±1.00	+5.00	ppm		
Stability over operating temperature	-35.00	≤ ±20.00	+35.00	ppm		
Aging @ 25°C over 10-years	-7.00		+7.00	ppm		
Frequency variation over supply voltage change (±5%)	-2.00		+2.00	ppm		
Frequency variation over load variation (15pF ± 5%)	-1.00		+1.00	ppm		
Supply Voltage (V _{dd}):	V _{dd} = 3.3V	3.135	3.300	3.465	V	
	V _{dd} = 2.5V	2.375	2.500	2.625	V	
Input Current:	V _{dd} = 3.3V		45	mA	Frequency dependent	
	V _{dd} = 2.5V		35	mA	Frequency dependent	
Symmetry:	48	50	52	%	@ 1/2V _{dd}	
Rise and Fall Time (Tr/Tf):		≤ 450	1000	ps		
Output Load:			15	pF	CMOS	
Output Voltage:	VOH	V _{dd} * 0.90		V		
	VOL		V _{dd} * 0.10	V		
Start-up Time:		≤ 2.0	3.0	ms		
Enable/Disable Function :	"1" (V _{IH} ≥ 0.7*V _{dd}) or Open: Oscillation "0" (V _{IL} < 0.3*V _{dd}) : High Z					
V _{control} Range	0.00		V _{dd}	Volts		
Frequency Pull	±50			ppm		
Control Port Bandwidth	10			kHz		
Phase jitter RMS [t _{jitter(φ)}] <i>See Note #2</i>	Integer Mode		< 0.60	1.60	ps	12kHz to 20MHz
	Fractional Mode		< 0.90	1.60	ps	12kHz to 20MHz

Note #1: Inclusive of initial tolerance at 25°C±3°C, operating temperature range, input voltage variation, load variation & aging.

Note #2: The rms jitter over 12kHz to 20MHz Bandwidth is dependent on the carrier and whether or not the final frequency is achieved without engaging the Fractional Mode

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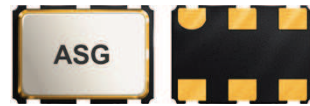
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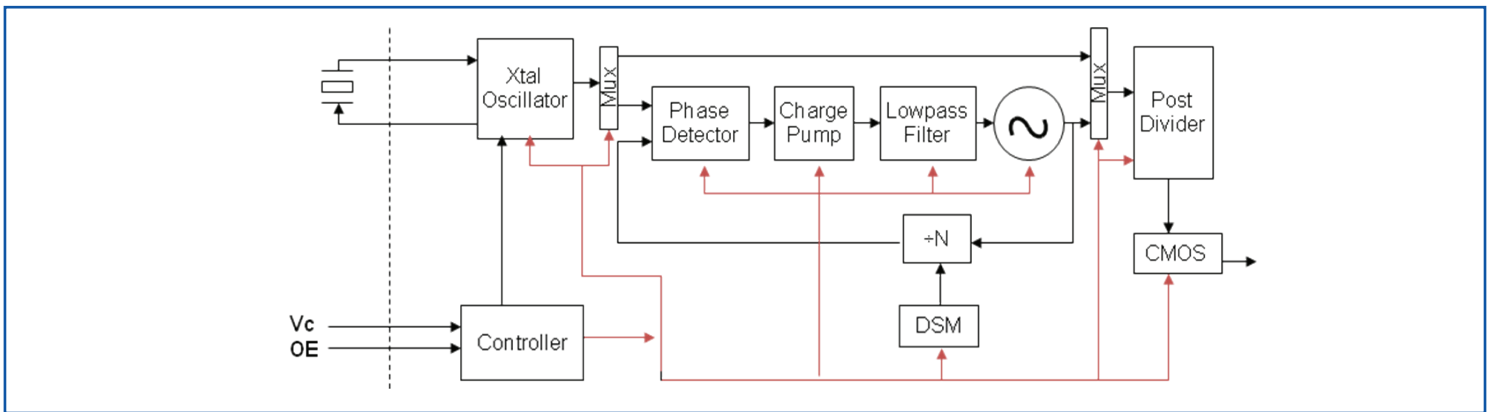


RoHS
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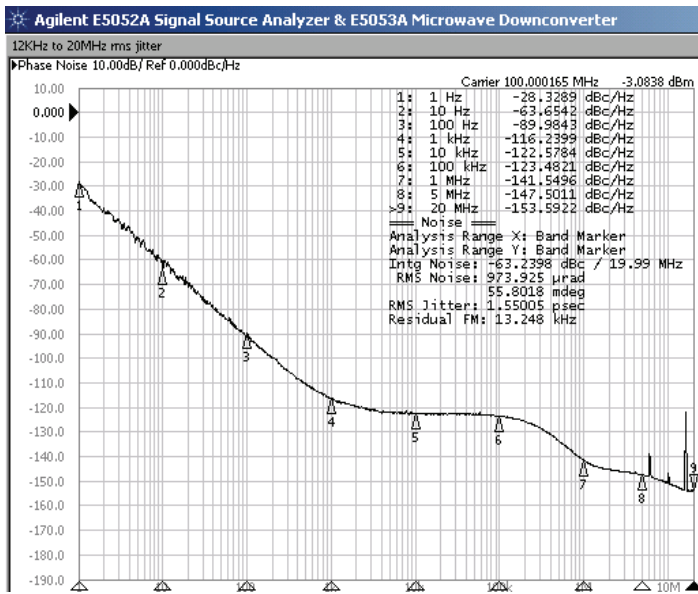
7.0 x 5.0 x 2.0mm

OVERALL SYSTEM BLOCK DIAGRAM

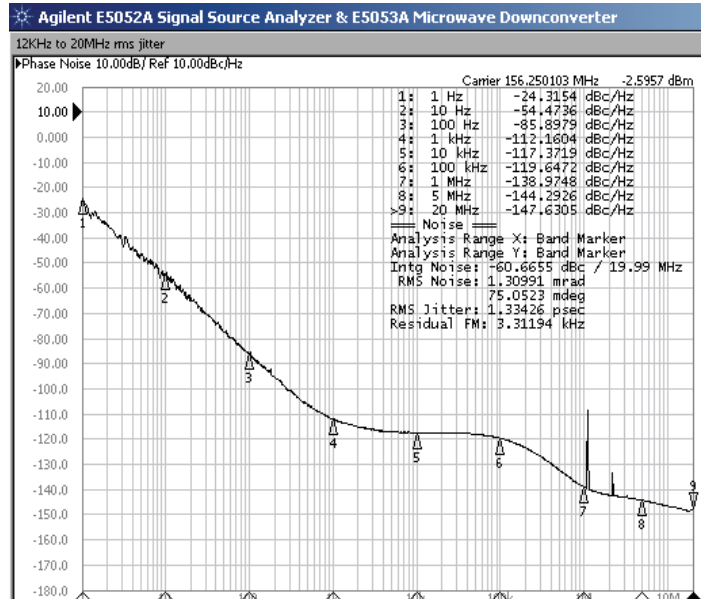


PHASE NOISE & JITTER CHARACTERISTICS

100MHz Carrier



156.25MHz Carrier



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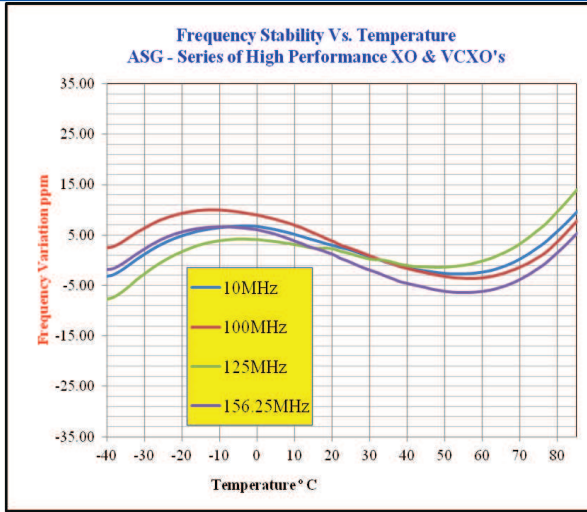


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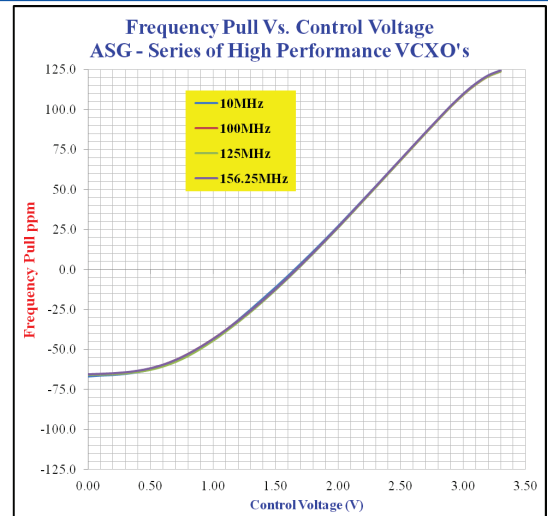


7.0 x 5.0 x 2.0mm

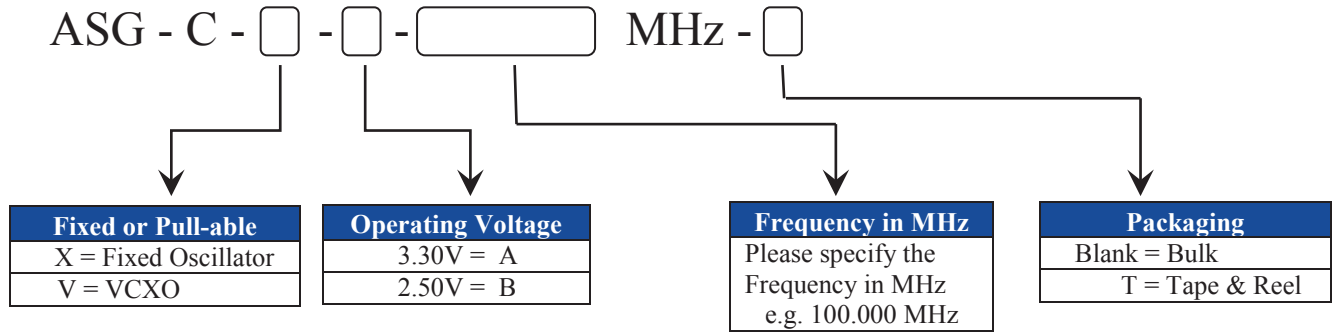
FREQUENCY STABILITY VS. TEMPERATURE



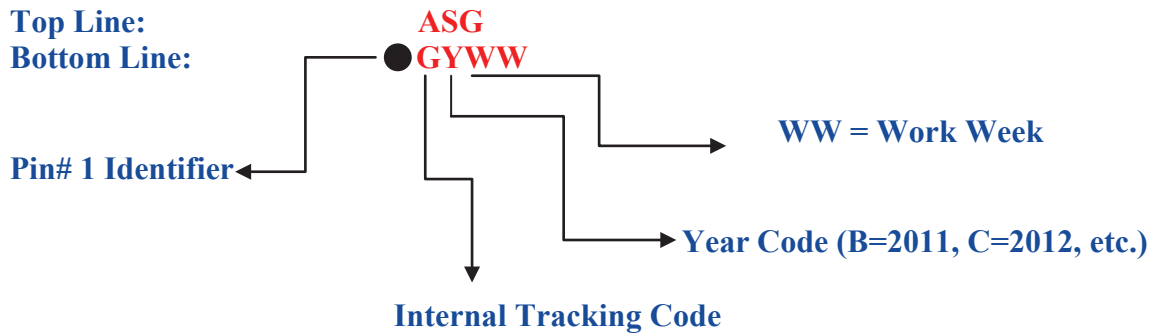
FREQUENCY PULLING VS. CONTROL VOLTAGE (VCXO MODE)



PART IDENTIFICATION:



MARKING:



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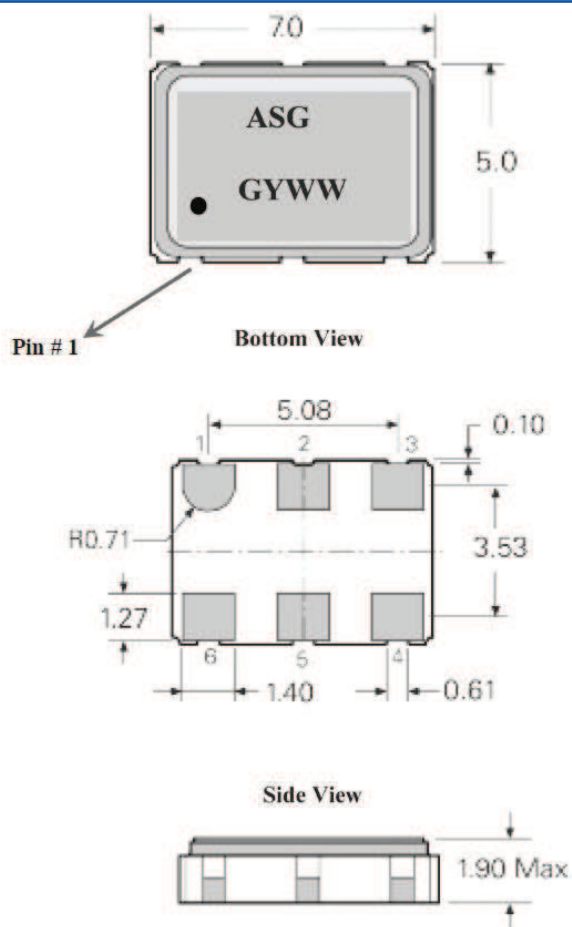


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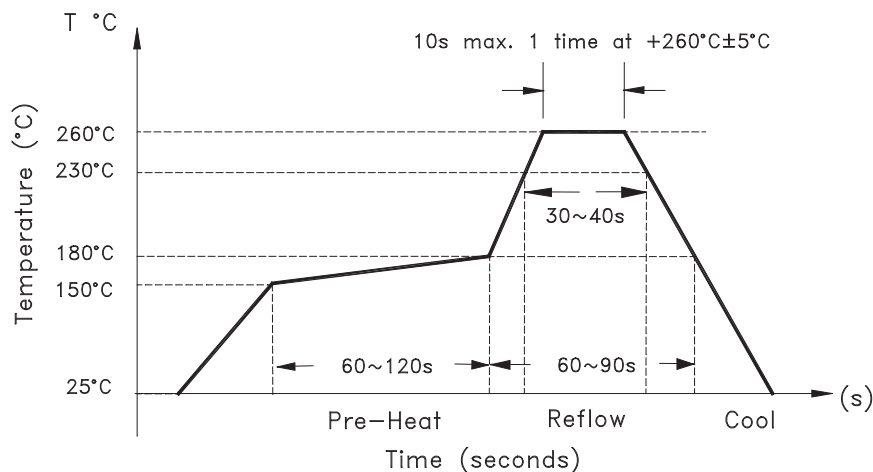
OUTLINE DIMENSIONS:

Pin #	Pin Description For VCXO configuration
1	Voltage Control for VCXO
2	Output Enable (OE)
3	GND
4	RF Output
5	N/C
6	Vdd

Pin #	Pin Description For XO configuration
1	Output Enable (OE)
2	N/C for XO
3	GND
4	RF Output
5	N/C
6	Vdd



REFLOW PROFILE:



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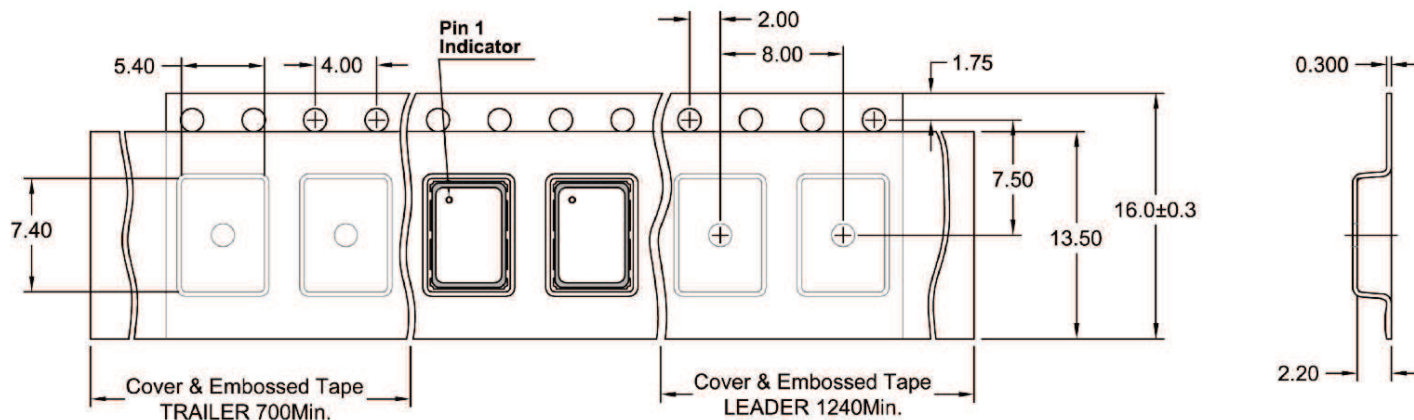


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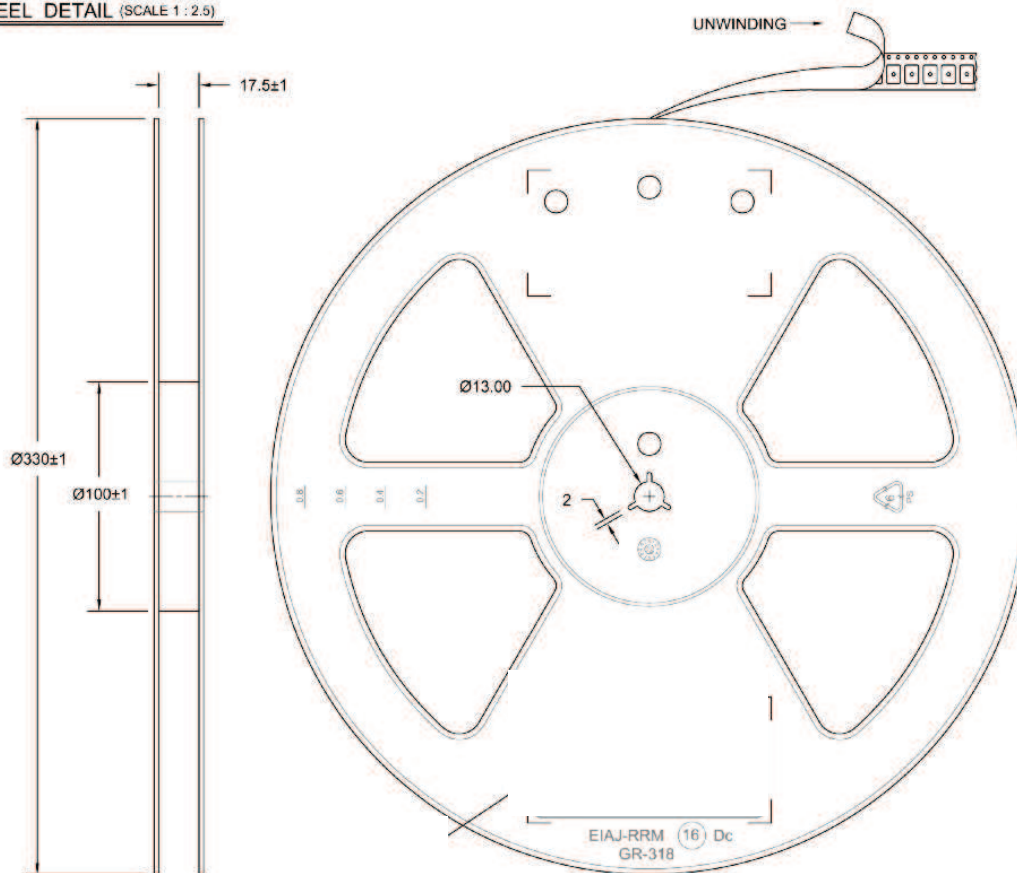
TAPE & REEL:

T= Tape and reel (2,000pcs/reel)

TAPE DETAIL (SCALE 2 : 1)



REEL DETAIL (SCALE 1 : 2.5)



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