

GS

50Ω load

True Sine Wave

Thru-Hole

3.3 V

5.0 V

Min.

10 MHz

Max.

250 MHz

Features

- High purity and low total harmonic distortion. Ideal for audio applications
- For Sine Wave clock Oscillators, please refer to "HS" and "HSR" series.



General specifications of all available packages , at Ta=+25°C

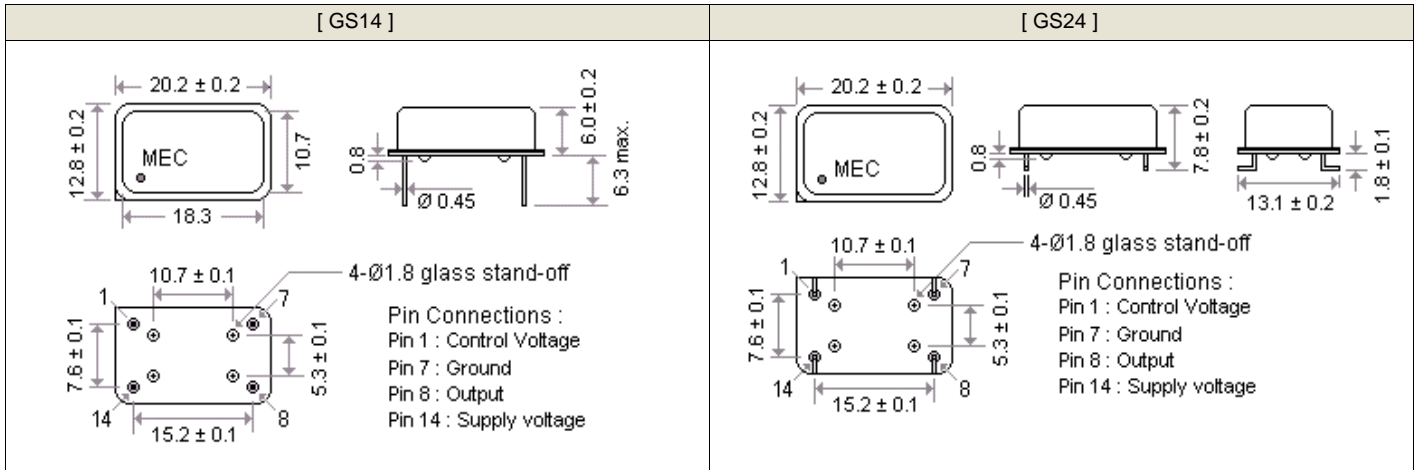
Output Wave Form		True Sine Wave			
Model		" GS " series			
Package	Thru-Hole	GS14 (20.2 * 12.8 * 6.0)			
Dimensions , unit : mm	Gull - Wing	GS24 (20.2 * 12.8 * 7.3)			
Input Voltage (V _{DD})		+3.3V D.C.±5%		+5.0V D.C.±10%	
Frequency Range		10.0 ~ 250.0MHz		10.0 ~ 156.0MHz	
Initial Freq. Accuracy (at 25 °C)		V _c = 1.65V ± 0.2V		V _c = 2.5V ± 0.2V	
Control Voltage Center		1.65 V _{DC}		2.5 V _{DC}	
Control Voltage Range		0.3 V to 3.0 V		0.5 V to 4.5 V	
Output Level		Standard: + 3.0 dBm min. Tolerance: ± 1 dB Max. Power: + 7 dBm User to specify		Standard: + 5.0 dBm min. Tolerance: ± 1 dB Max. Power: + 13 dBm User to specify	
Load		50Ω. (Internally AC coupled)			
Harmonics		< - 30dBc (frequency dependent)			
Current Consumption		10 MHz : 9 mA (typ.)		10 MHz : 18 mA (typ.)	
		100 MHz : 18 mA (typ.)		100 MHz : 34 mA (typ.)	
		150 MHz : 19 mA (typ.)		150 MHz : 36 mA (typ.)	
Frequency Deviation Range		± 80 ppm (min.)			
Input Impedance		> 10 K Ω			
Modulation Bandwidth (at -3 dB)		10 KHz min.			
Frequency Stability Codes	Frequency Stability over Operating Temperature Range	± 25 ppm	± 50 ppm	± 100 ppm	If non-standard please enter the desired stability after the " C " or " I " represents . For example : " C2 0" : ± 20 ppm over -10°C to +70°C " I20 " : ± 20 ppm over -40°C to +85°C
	Commercial (-10°C to +70°C)	A	B	C	
	Industrial (-40°C to +85°C)	D	E	F	
Sub-Harmonics		None			
Voltage Control Range		0.0 V to V _{DD} with control voltage center at 50% of V _{DD}			
Linearity		±10 % max.			
Slope Polarity		Positive. Increasing control voltage increases output frequency			
Phase Noise (typical)	Offset			125.0 MHz as example	
	10 Hz			-75 dBc /Hz	
	100 Hz			-110 dBc /Hz	
	1 KHz			-125 dBc /Hz	
	10 KHz			-132 dBc /Hz	
	100 KHz			-128 dBc /Hz	
Start -up Time		6.0 m Sec.(typ.)			
Aging		± 5 ppm per year (max.)			

Mercury www.mercury-crystal.com

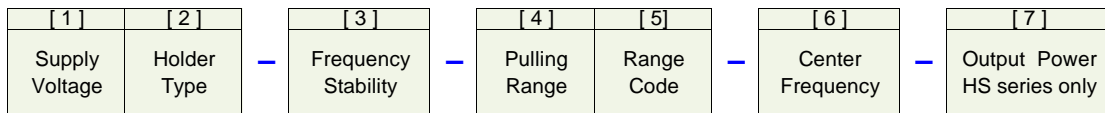
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Outline Dimensions (Unit : mm) , Suggested pad Layout for SMDs



Part Number Format and Example

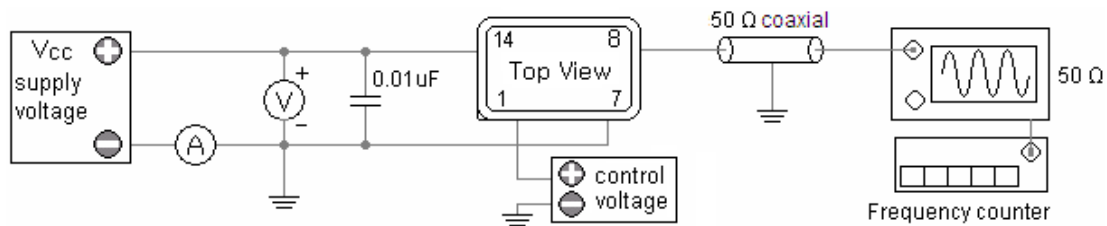


Example (1) 3 GS14 - A - 80 N - 100.000 - 5

Ex (1) : 3GS14G - A - 80N - 100.000 - 5 [+3.3V , G₁₄ type , 50 Ω load , RoHS , ±25ppm (-10°C to 70°C) , pulling : ±80 ppm (min) , 100.000MHz , power : 5dBm ±1dB]

[1]	Supply voltage , " 3 " for +3.3V ; " 5 " for +5.0V	
[2]	Holder Type	
[3]	-10°C ~ 70 °C	" A " ± 25ppm ; " B " ± 50ppm ; " C " ± 100ppm ; If non-standard please enter the desired stability after " C " , for example " C15 " : represents ±15ppm over -10 to +70°C
	-40°C ~ 85 °C	" D " ± 25ppm ; " E " ± 50ppm ; " F " ± 100ppm ; If non-standard please enter the desired stability after " I " , for example " I20 " : represents ±20ppm over -40 to +85°C
[4]	3.3V	From ±30ppm ~ ±150ppm , control Voltage range : 0.3V ~ 3.0 ; control voltage center : ± 1.65 V
	5.0V	From ±70ppm ~ ±200ppm , control Voltage range : 0.5V ~ 4.5V ; control voltage center : ± 2.5 V
[5]	Pulling Range Code " M " stands for maximum ; " N " stands for minimum ; " T " stands for typical (tolerance is ± 20%)	
[6]	Center Frequency in MHz	
[7]	Output power in dBm (HS series only)	

" GS " series : 50 Ω Load Test Circuit :



Output Wave Form

