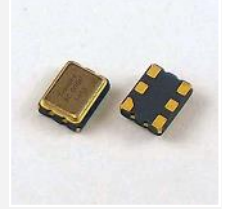


**MINIATURE CERAMIC SMD OSCILLATOR (3.2 x 2.5 x 1.1mm)**
**FEATURES**

- Available with output frequency from 10M~1.5GHz
- High reliability and low aging
- Available CMOS, LVDS, and LVPECL outputs
- 3.3V and 2.5V supply options

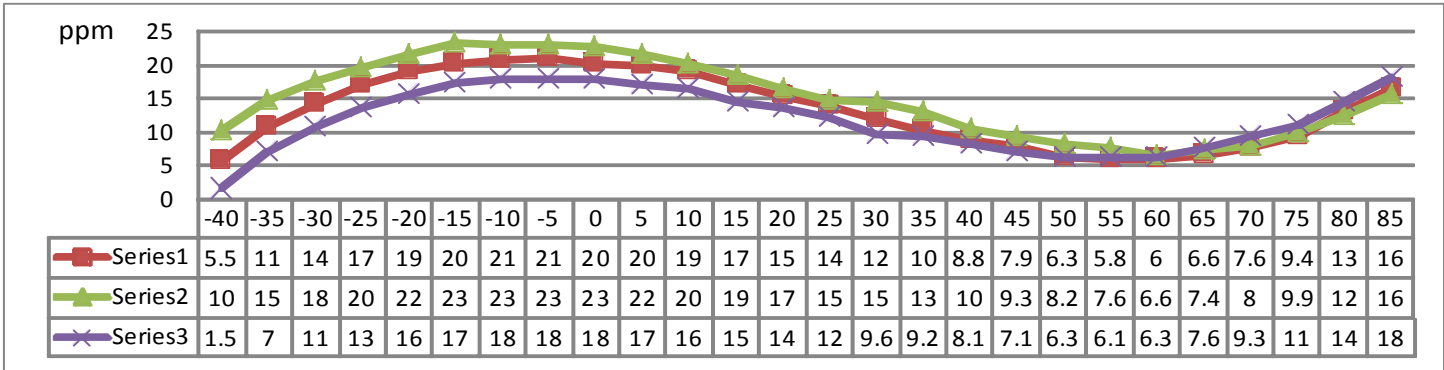

**■ SPECIFICATION**

PARAMETER		MIN.	TYP.	MAX.	UNIT	NOTE	
FREQUENCY RANGE	CMOS	10		250	MHz		
	LVDS	10		1500	MHz		
	LVPECL	10		1500	MHz		
FREQUENCY STABILITY		±10*	±50	±100	ppm		
OPERATING TEMPERATURE RANGE		-40		85	°C	* See P/N guide for other options	
STORAGE TEMPERATURE RANGE		-55		125	°C		
SUPPLY VOLTAGE ±10%	V <sub>DD</sub> = 2.5V <sub>DC</sub>	2.375	2.500	2.625	V	* See P/N guide for other options	
	V <sub>DD</sub> = 3.3V <sub>DC</sub>	2.970	3.300	3.630	V		
SUPPLY CURRENT	CMOS		20	45	mA	(V <sub>DD</sub> = 2.5V <sub>DC</sub> , 3.3V <sub>DC</sub> )	
	LVDS		23	45	mA		
	LVPECL		54	60	mA		
OUTPUT	LOAD	CMOS		15	pF		
		LVDS		100	Ω	Output - Complimentary Output	
		LVPECL		50	Ω	into V <sub>DD</sub> - 2V <sub>DC</sub>	
	LEVEL	CMOS (V <sub>OH</sub> )	0.9 x V <sub>DD</sub>			V	
		CMOS (V <sub>OL</sub> )			0.1 x V <sub>DD</sub>	V	
		LVDS (V <sub>OH</sub> )		1.4	1.6	V	
		LVDS (V <sub>OL</sub> )	0.9	1.1		V	
		LVPECL (V <sub>OH</sub> )	V <sub>DD</sub> - 1.03V		V <sub>DD</sub> - 0.60V	V	
		LVPECL (V <sub>OL</sub> )	V <sub>DD</sub> - 1.85V		V <sub>DD</sub> - 1.60V	V	
	SYMMETRY (DUTY CYCLE)	CMOS	45		55	%	
		LVDS	45		55	%	
		LVPECL	45		55	%	
RISE AND FALL TIME (Tr/Tf)	CMOS		1.0	3.0	nS		
	LVDS		0.25	1.0	nS		
	LVPECL		0.25	1.0	nS		
START-UP TIME			2.0	3.0	mS		
STAND-BY VOLTAGE	ENABLE (V <sub>IH</sub> )	0.7 x V <sub>DD</sub>			V		
	DISABLE (V <sub>IL</sub> )			0.3 x V <sub>DD</sub>	V		
ENABLE DELAY TIME				100	nS		
DISABLE DELAY TIME				100	nS		
AGING	per 1year			±3.0	ppm	@ 25°C ±3°C	
	per 10years			±5.0	ppm		
PHASE JITTER RMS			0.60	1.50	pS	@ 12kHz ~ 20MHz	

\* Available in selected operating temperature range

*Transko Electronics, Inc reserves the right to make changes to the product (s), service (s), and specification (s) described herein without notice. See "Terms of Sale" for details on our website.*

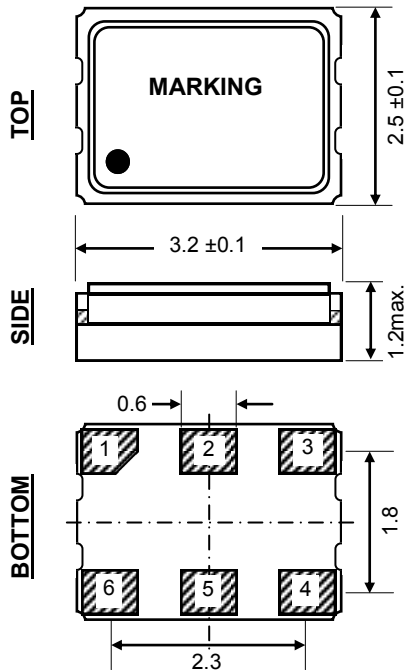
## ■ 27MHz 3.3V Temperature Test Data (-40°C ~ 85°C)



## ■ Typical Phase Noise

Frequency	1kHz	10kHz	100kHz	1MHz
156.25MHz	-114.70 dBc/Hz	-124.11 dBc/Hz	-126.23 dBc/Hz	-140.45 dBc/Hz
212.5MHz	-108.73 dBc/Hz	-115.58 dBc/Hz	-116.22 dBc/Hz	-136.02 dBc/Hz
622.08MHz	-100.38 dBc/Hz	-106.69 dBc/Hz	-106.43 dBc/Hz	-126.36 dBc/Hz

## ■ PACKAGE DIMENSIONS

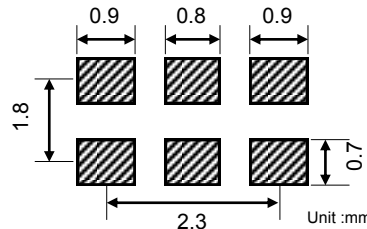


Unit : mm

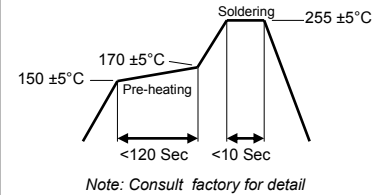
Pin Configuration	
1	En/Dis or NC
2	En/Dis or NC
3	GND
4	Output
5	**C.output
6	V <sub>DD</sub>

\*\* LVDS/LVPECL only  
NC for CMOS

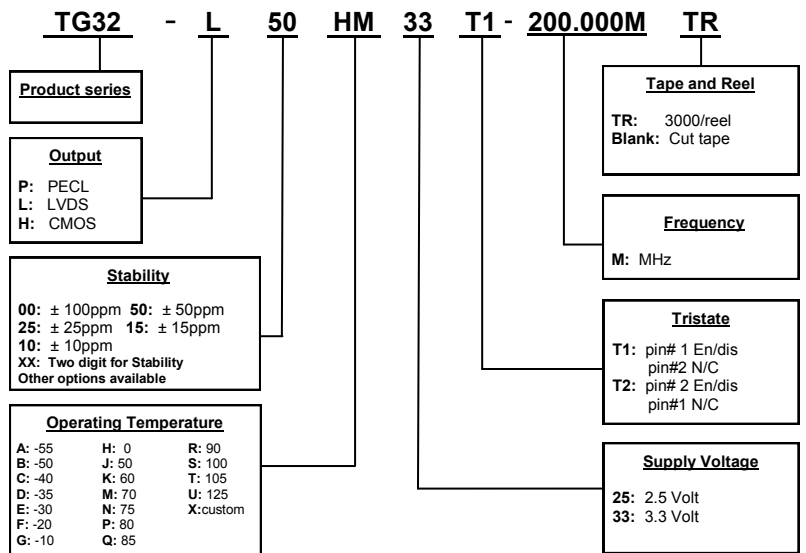
## ■ SOLDER PATTERN



## ■ REFLOW PROFILE



## ■ PART NUMBERING GUIDE



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