

DUAL FREQUENCY OUTPUT CERAMIC SMD VCXO (7.0 x 5.0mm)
FEATURES

- Designed specifically for Digital Video application
- 2 user-selectable output frequencies: 148.3516MHz, 148.500MHz
- High reliability and low aging
- Available CMOS, LVDS, and LVPECL outputs
- 3.3V and 2.5V supply options

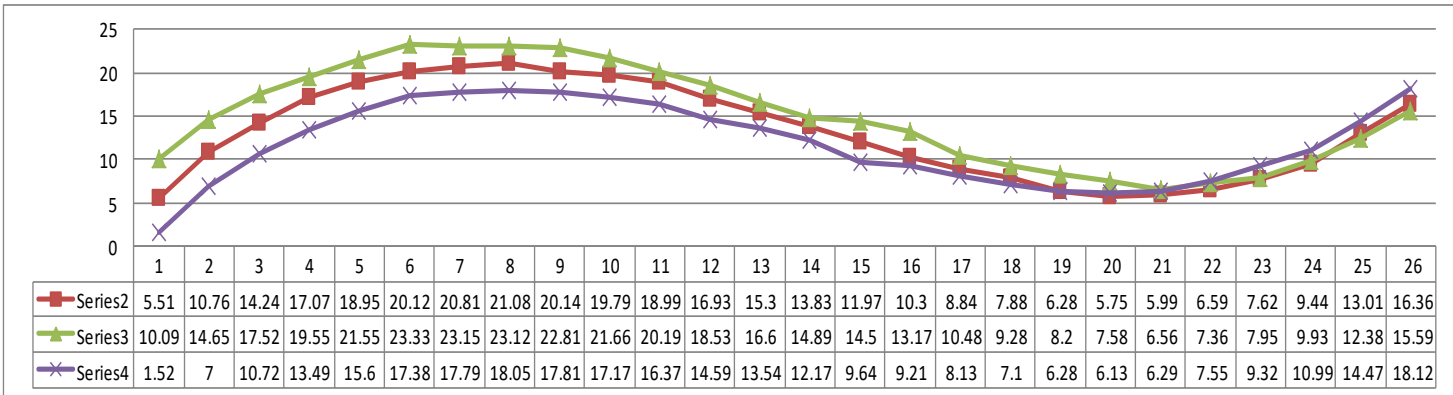

■ SPECIFICATION

PARAMETER		MIN.	TYP.	MAX.	UNIT	NOTE			
FREQUENCY		148.3516MHz, 148.500MHz							
FREQUENCY STABILITY		±10*	±50	±100	ppm	See P/N guide for other options			
OPERATING TEMPERATURE RANGE		-40		85	°C	See P/N guide for other options			
STORAGE TEMPERATURE RANGE		-55		125	°C				
SUPPLY VOLTAGE ±10%		$V_{DD} = 2.5V_{DC}$	2.375	2.500	2.625	V			
		$V_{DD} = 3.3V_{DC}$	2.970	3.300	3.630	V			
SUPPLY CURRENT		CMOS		20	45	mA			
		LVDS		23	45	mA	$(V_{DD} = 2.5V_{DC}, 3.3V_{DC})$		
		LVPECL		54	60	mA			
OUTPUT		LOAD		CMOS		15	pF		
				LVDS		100		Ω	Output - Complementary Output
				LVPECL		50		Ω	into $V_{DD} - 2V_{DC}$
		LEVEL		CMOS (V_{OH})	$0.9 \times V_{DD}$			V	
				CMOS (V_{OL})			$0.1 \times V_{DD}$	V	
				LVDS (V_{OH})		1.4	1.6	V	
LVDS (V_{OL})	0.9			1.1		V			
SYMMETRY (DUTY CYCLE)		LVPECL (V_{OH})	$V_{DD} - 1.03V$		$V_{DD} - 0.60V$	V			
		LVPECL (V_{OL})	$V_{DD} - 1.85V$		$V_{DD} - 1.62V$	V			
RISE AND FALL TIME (T_r/T_f)		CMOS		1.0	3.0	nS			
		LVDS		0.25	0.6	nS			
		LVPECL		0.25	0.6	nS			
START-UP TIME			2.0	3.0	mS				
STAND-BY VOLTAGE		ENABLE (V_{IH})	$0.7 \times V_{DD}$			V			
		DISABLE (V_{IL})			$0.3 \times V_{DD}$	V			
ENABLE DELAY TIME				100	nS				
DISABLE DELAY TIME				100	nS				
FREQUENCY DEVIATION		±50			ppm	See P/N guide for other options			
CONTROL VOLTAGE		0.00		V_{DD}	V				
SLOPE		Positive							
LINEARITY				10	%				
MODULATION BANDWIDTH		10			kHz				
INPUT IMPEDANCE		100			kΩ				
AGING		per 1year			±3.0	ppm			
		per 10years			±5.0	ppm	@ 25°C ±3°C		
PHASE JITTER RMS			0.60	1.50	pS	@ 12kHz ~ 20MHz			
PERIOD JITTER			2.0	3.0	pS				

* Available in selected operating temperature range

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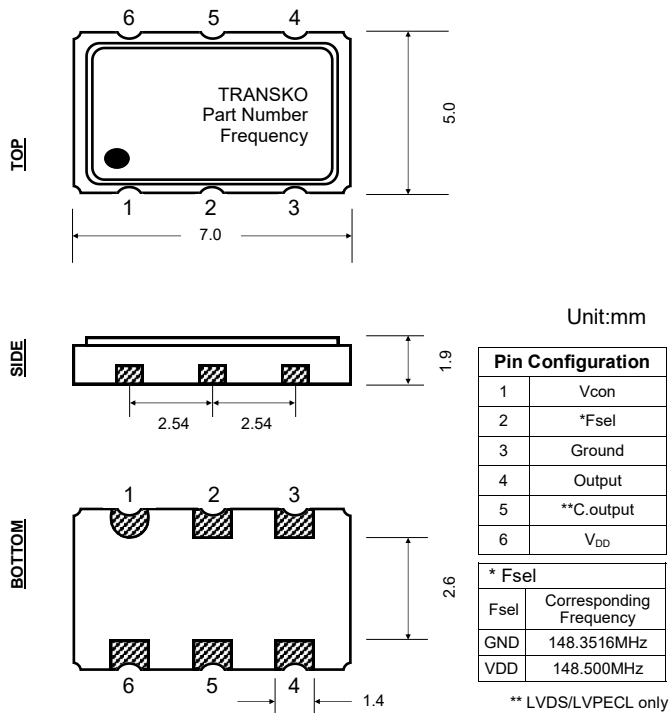
27MHz 3.3V VCXO Temperature Test Data (-40°C ~ 85°C)



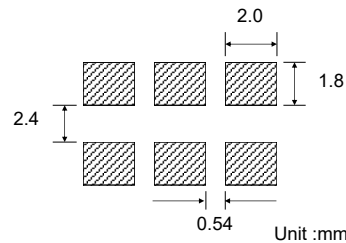
Phase Noise & RMS Jitter measurement

NO	10Hz	100Hz	1kHz	10kHz	100kHz	1MHz	5MHz	RMS Jitter
1	-80.6273	-112.688	-129.15	-137.313	-147.43	-155.45	-156.504	361.533 fsec
2	-61.0806	-97.5347	-128.019	-137.417	-147.984	-155.629	-154.72	349.765 fsec
3	-77.2813	-112.702	-127.812	-138.709	-149.653	-155.171	-154.144	346.426 fsec
Average	-72.9964	-107.642	-128.327	-137.813	-148.356	-155.416	-155.122	352.57 fsec

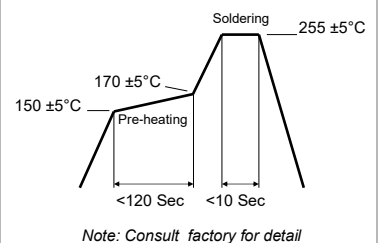
PACKAGE DIMENSIONS



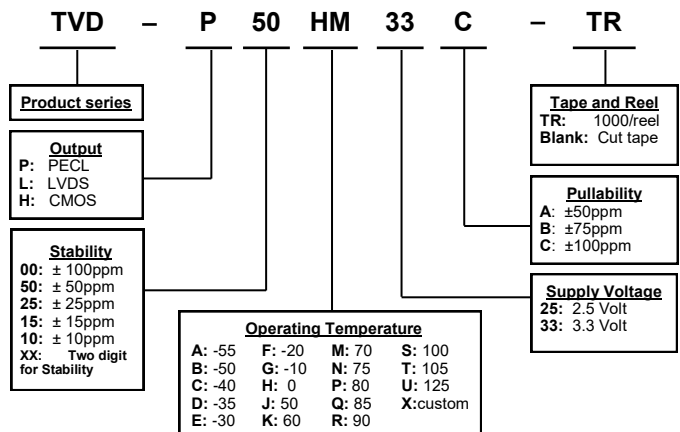
SOLDER PATTERN



REFLOW PROFILE



PART NUMBERING GUIDE



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