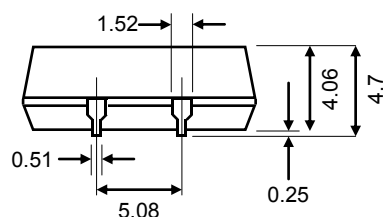
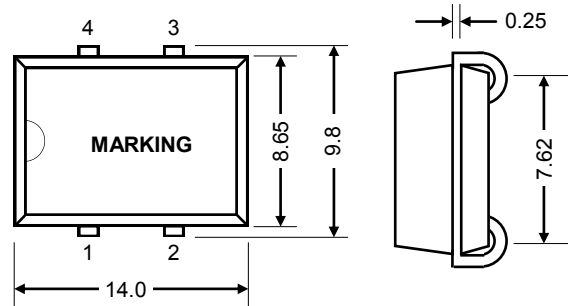


PLASTIC MOLDED STANDARD SMD OSCILLATOR (14.0 x 9.8 x 4.7mm)
FEATURES

- PLASTIC MOLDED SMD OSCILLATOR
- WIDE FREQUENCY RANGE
- REFLOW CAPABLE / LOW CURRENT

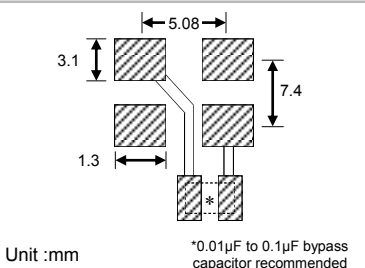

■ SPECIFICATION

FREQUENCY RANGE		1.000MHz ~ 125.000MHz
FREQUENCY STABILITY		±10ppm ~ ±100ppm
OPERATING TEMPERATURE RANGE		STD: 0°C ~ +70°C, Option: -40°C ~ +85°C (See P/N guide for other options)
STORAGE TEMPERATURE RANGE		-55°C ~ 125°C
SUPPLY VOLTAGE ± 10%		3.3V _{DC} , 5.0V _{DC}
SUPPLY CURRENT		45mA max.
OUTPUT	LOGIC FAMILY	HCMOS, TTL, CMOS/TTL
	LOAD	15pF, 10TTL
	LEVEL LOGIC '1' (V_{OH})	HCMOS: 0.9 x V _{DD} min. TTL: 2.4V _{DC} min.
	LEVEL LOGIC '0' (V_{OL})	HCMOS: 0.9 x V _{DD} max. TTL: 0.4V _{DC} max.
	SYMMETRY (DUTY CYCLE)	STD: 40% / 60%, option: 45% / 55%
	RISE AND FALL TIME (Tr/Tf)	7nS max.: 1.000MHz ≤ f ≤ 60.000MHz 5nS max.: 60.000MHz < f ≤ 70.000MHz 4nS max.: 70.000MHz < f ≤ 125.000MHz
	START-UP TIME	5mS max.
STAND-BY VOLTAGE	ENABLE (V_{IH})	0.7 x V _{DD} ≤ V _{IH} ≤ V _{DD} or N/C
	DISABLE (V_{IL})	V _{IL} ≤ 0.3 x V _{DD}
AGING @ 25°C ± 3°C		±3.0ppm / 1 st year max.
PHASE JITTER RMS (12kHz ~ 20MHz)		1pS max.

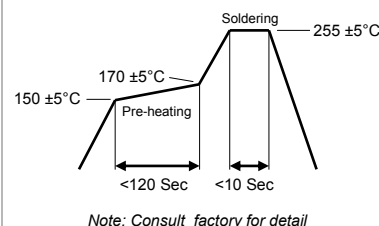
■ PACKAGE DIMENSIONS


Unit:mm

Pin Configuration	
1	En/Dis or NC
2	GND
3	Output
4	V _{DD}

■ SOLDER PATTERN


Unit :mm

■ REFLOW PROFILE


Note: Consult factory for detail

■ PART NUMBERING GUIDE

TSP		-	H	50	HM	33	S	T	-	20.000M	-	TR
Product series												
Output H: HCMOS												
Stability 00: ± 100ppm 50: ± 50ppm 25: ± 25ppm 15: ± 15ppm 10: ± 10ppm XX: Two digit for Stability												
Operating Temperature A: -55 F: -20 M: 70 S: 100 B: -50 G: -10 N: 75 T: 105 C: -40 H: 0 P: 80 U: 125 D: -35 J: 50 Q: 85 X: custom E: -30 K: 60 R: 90												
Tape and Reel TR: 1000/reel Blank: Cut tape												
Frequency M: MHz												
Tristate T: En/Dis or N/C N: N/C												
Symmetry R: 40/60% S: 45/55%												
Supply Voltage 33: 3.3 Volt 50: 5.0 Volt												

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