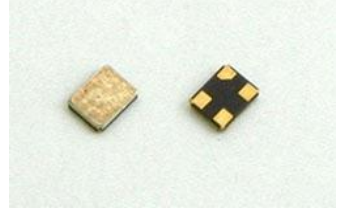


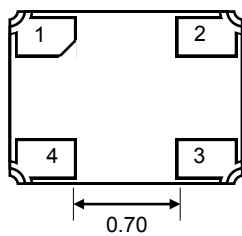
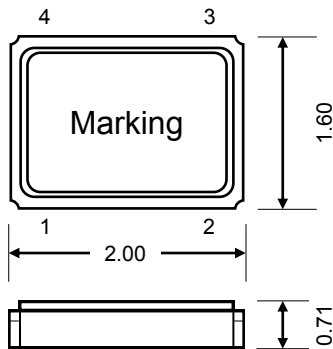
ULTRA MINIATURE SMD HCMOS OSCILLATOR (2.0 x 1.6 x 0.71mm)

FEATURES:

- WIDE FREQUENCY RANGE
- LOW VOLTAGE / LOW CURRENT
- ENABLE / DISABLE

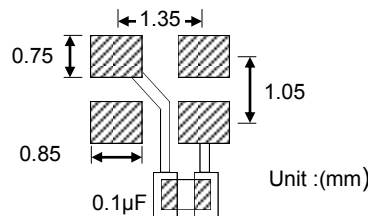


MODEL	TSM21		
SUPPLY VOLTAGE	1.8V	2.5V	3.3V
FREQUENCY RANGE	1.000MHz ~ 60.000MHz		1.000MHz ~ 80.000MHz
FREQUENCY STABILITY*	± 25ppm ~ ± 100ppm*		
OUTPUT	HCMOS		
OPERATING TEMPERATURE	0°C to 70°C, Option: -40°C to 85°C		
INPUT CURRENT	15mA max.	17mA max.	18mA max.
DUTY CYCLE	R: 40/60%, S: 45/55% @ 1/2 V _{DD} level		
RISE TIME	5.0nS typical, 10.0nS max		
FALL TIME	5.0nS typical, 10.0nS max		
OUTPUT LOGIC '1' LEVEL (V _{oh})	90% V _{DD} min.		
OUTPUT LOGIC '0' LEVEL (V _{ol})	10% V _{DD} max.		
OUTPUT LOAD	15pF max.		
START UP TIME	10mS max.		
AGING	± 3.0ppm max./year @ 25°C ± 3°C		
PIN# 1 TRISTATE	Enable / Disable		

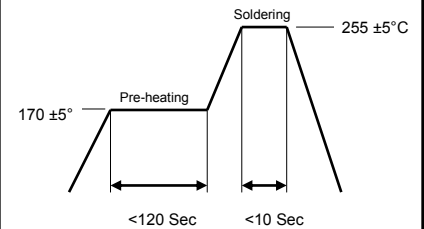
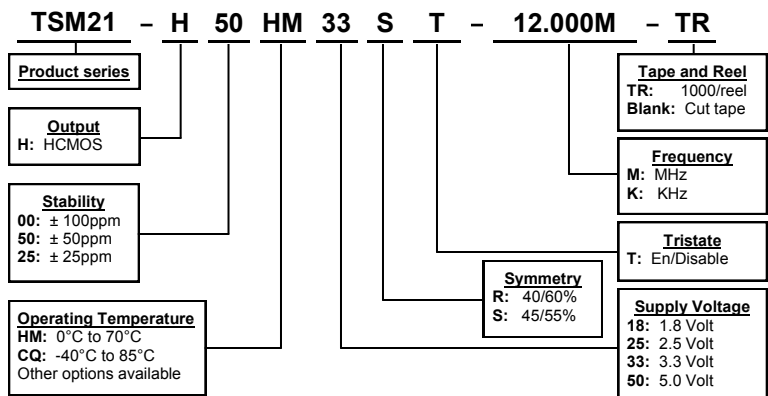
PACKAGE DIMENSIONS


Unit : mm

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

SOLDER PATTERN


* Recommended to use bypass capacitor between pin# 2 and pin#4

REFLOW PROFILE

PART NUMBERING GUIDE


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