

Ceramic SMD Crystal Oscillator SMD 7.0 x 5.0mm PECL

MO7P series

MERITEK

FEATURE

- Output Logic: PECL
- Small SMD Ceramic Package
- Low Jitter Performance
- Applications: 10G-BIT, Ethernet, Fiber Channel, Storage Area Network, SONET, Enterprise Servers, Reference Clocks for ADC and DAC Telecom



PART NUMBERING SYSTEM

MO7 P 33 J C 24M0
(1) (2) (3) (4) (5) (6)

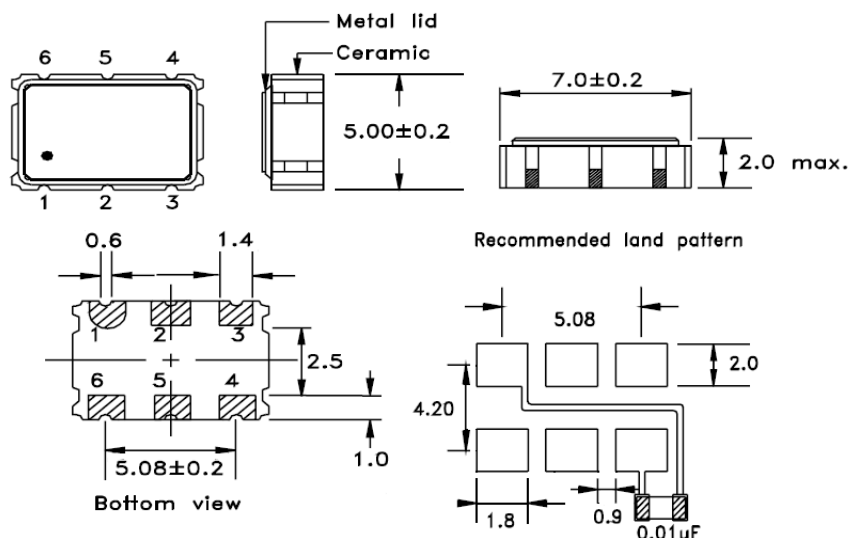


No	Item	Code	Description	Series Reference (options)
(1)	Meritek Series	MO7	Oscillator Unit	Ceramic SMD Crystal Oscillator 7.0x5.0mm 6 Pads
(2)	Logic	P	P: PECL	P: PECL
(3)	Supply Voltage	33	33: 3.3V	25: 2.5V
(4)	Frequency Stability	J	J: ± 50 ppm	F: ± 20 ppm, G: ± 25 ppm, H: ± 30 ppm (see avail options)
(5)	Operating Temp.	C	C: $-20 \sim +70^\circ\text{C}$	A: $-10 \sim +60^\circ\text{C}$, B: $0 \sim +70^\circ\text{C}$, I: $-40 \sim +85^\circ\text{C}$ (see options)
(6)	Frequency	24M0	24M0: 24.000MHz	19M44 ~ 320M0 (M denotes decimal point)
(7)	Pin 1	Blank	Blank: Tri-State on Pin 1, No connection on Pin 2	N: No connection on Pin 1, Tri-State on Pin 2

DIMENSIONS AND RECOMMENDED PATTERN

Pin	Function
1	Tri-state / NC
2	NC / Tristate
3	GND
4	Q
5	Q Complimentary
6	V _{DD}

(Unit:mm)



AVAILABLE OPTIONS

Parameters	Part Number Options
Supply Voltage	25: 2.5V $\pm 10\%$, 33: 3.3V $\pm 10\%$
Frequency Stability	F: ± 20 ppm, G: ± 25 ppm, H: ± 30 ppm, J: ± 50 ppm, K: ± 100 ppm
Operating Temp.	A: $-10 \sim +60^\circ\text{C}$, B: $0 \sim +70^\circ\text{C}$, C: $-20 \sim +70^\circ\text{C}$, K: $-30 \sim +85^\circ\text{C}$, I: $-40 \sim +85^\circ\text{C}$, R: $-40 \sim +105^\circ\text{C}$

Note: Custom options available. Contact Meritek for more information.

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ELECTRICAL CHARACTERISTICS

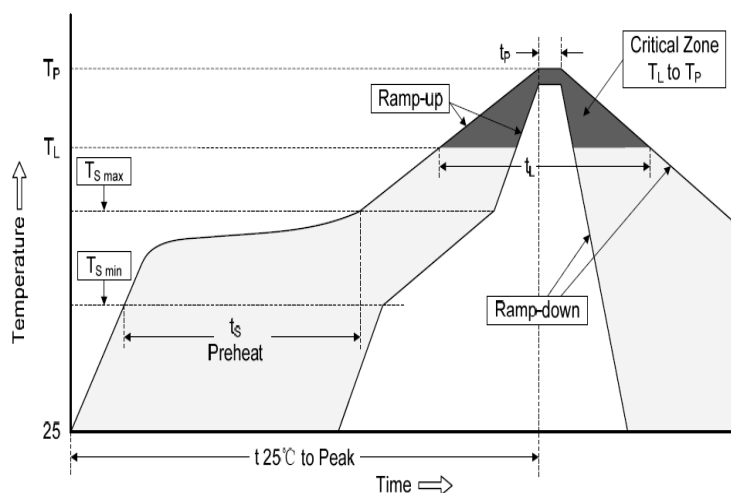
Parameters		Characteristic
Frequency Range		19.44 ~ 320.000 MHz
Logic		PECL
Supply Voltage		3.3V ±10% (see options)
Frequency Stability		±50 ppm (see options)
Operating Temperature		-20 ~ +70°C (see options)
Storage Temperature		-55 ~ +125°C
Duty Cycle		50±5%
Aging @25°C (first year)		±3 ppm
Output Level (PECL)	High (Logic 1)	Vdd -1.025V min.
	Low (Logic 0)	Vdd -1.620V max.
Output Load (PECL)		50 Ω
Supply Current		100mA max. (see Table 1)
Start Up Time		3mSec max.
Rise/ Fall Time (Tr/Tf)	19.44MHz ~ 320.0MHz	1nSec max.
Tri-State (Input Pin 1 or Pin 2)	Enable High or Float	0.7 Vdd min.
	Disable Low or GND	0.3 Vdd max.
RMS Phase Jitter (12Khz~20MHz)		1pSec max.
Phase Noise	100 Hz	-70 dBc/Hz
	1 KHz	-100 dBc/Hz
	10 KHz	-125 dBc/Hz

TABLE 1: SUPPLY CURRENT (mA max.)

Frequency	3.3V	2.5V
80.00 MHz ~ 159.99 MHz	75	75
160.00 MHz ~ 249.99 MHz	100	100
250.00 MHz ~ 320.00 MHz	100	100

RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min $T_{s(min)}$	150°C
	Temp. Max $T_{s(max)}$	180°C
	Time (min. to max.) (t_s)	60~120 seconds
Average ramp up rate (T_L) to peak		1°C/second max.
$T_{s(max)}$ to T_L (Ramp-up rate)		3°C/second max.
Reflow	Temp. (T_L)	230°C
	Time (min. to max.) (t_L)	30~40 seconds
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (t_p)		10 seconds max.
Ramp-down Rate		6°C/second



*Specifications subject to change without notice.