

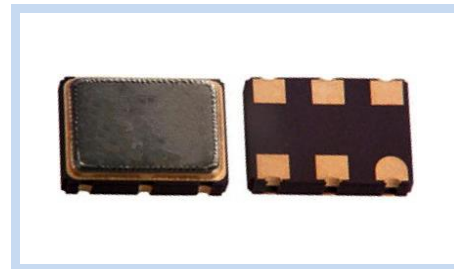
Ceramic SMD Crystal Oscillator SMD 7.0 x 5.0mm LVDS

MO7L series

MERITEK

FEATURE

- Output Logic: LVDS
- 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 L 33 J C 24M0
(1) (2) (3) (4) (5) (6)

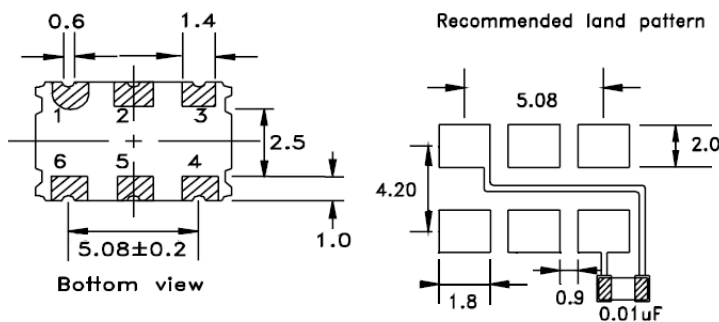
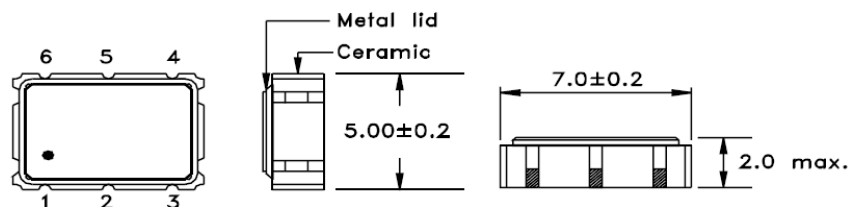


No	Item	Code	Description	Series Reference (options)
(1)	Meritek Series	MO7	Oscillator Unit	Ceramic SMD Crystal Oscillator 7.0x5.0mm 6 Pads
(2)	Logic	L	L: LVDS	L: LVDS
(3)	Supply Voltage	33	33: 3.3V	25: 2.5V
(4)	Frequency Stability	J	J: ±50ppm	F: ±20ppm, G: ±25ppm, H: ±30ppm (see avail options)
(5)	Operating Temp.	C	C: -20~+70°C	A: -10~+60°C, B: 0~+70°C, I: -40~+85°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)



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AVAILABLE OPTIONS

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

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

ELECTRICAL CHARACTERISTICS

Parameters		Characteristic
Frequency Range		19.44 ~ 320.000 MHz
Logic		LVDS
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 (LVDS)	High (Logic 1)	1.6 V max.
	Low (Logic 0)	0.9 V min.
Output Load (LVDS)		100 Ω
Supply Current		65mA 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)	Enable High or Float	0.7 Vdd min.
	Disable Low or GND	0.3 Vdd max.
Differential Output Voltage		247 ~ 454mV (330mV Typ.)
Differential Output Error		50mV max.
Offset Voltage		1.125 ~ 1.375V (1.25V Typ.)
Offset Error		50mV max.
RMS Phase Jitter (12Khz~20MHz)		1.4pSec 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	50	50
160.00 MHz ~ 249.99 MHz	50	50
250.00 MHz ~ 320.00 MHz	65	65

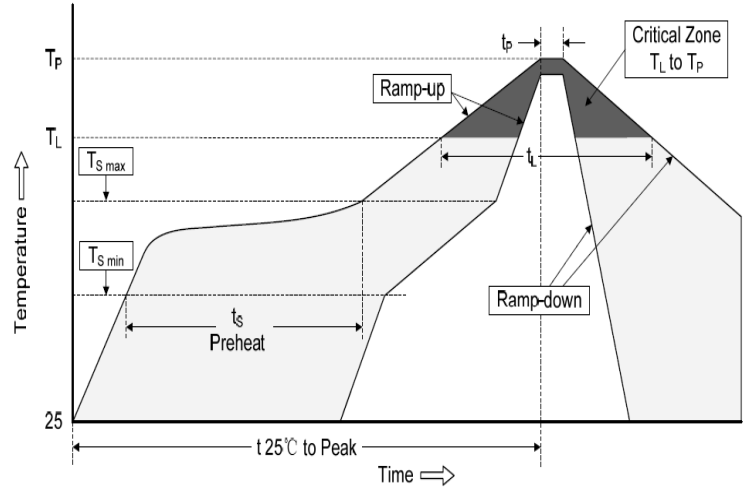
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RECOMMENDED SOLDERING PROFILES

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.