

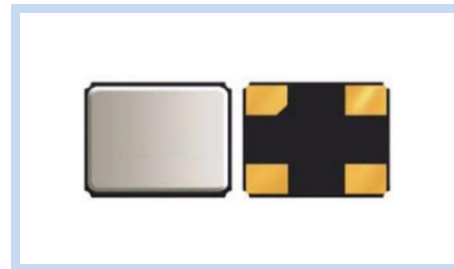
Ceramic SMD Crystal Unit SMD 3.2 x 2.5mm Type

MX3 series

MERITEK

FEATURE

- Surface Mount Low Profile
- Seam Sealed Ceramic
- Excellent Heat Resistance
- High precision and high frequency stability
- Applications: Wired Network, Mobile Communication, WiMAX, WLAN, Test Equipment



PART NUMBERING SYSTEM

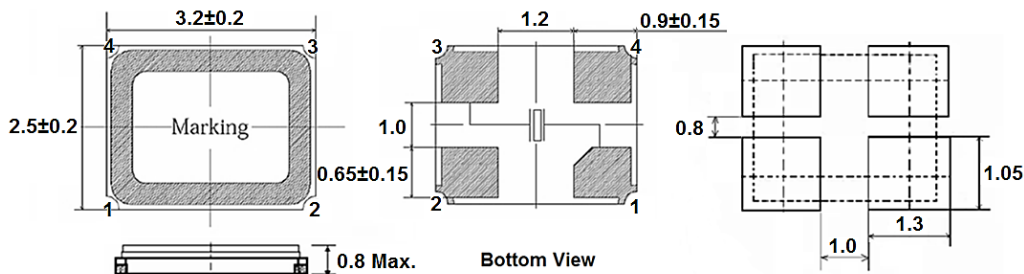
MX3 E H J I 24M0
(1) (2) (3) (4) (5) (6)



No	Item	Code	Description	Series Reference
(1)	Meritek Series	MX3	Crystal Unit	Ceramic SMD Crystal 3.2x2.5mm 4 Pads
(2)	Load Capacitance	F	E: 18pF	F: 20pF, R: Series Resonance (see options)
(3)	Frequency Tolerance	H	H: ±30ppm	F: ±20ppm, G: ±25ppm (see options)
(4)	Stability vs Oper Temp.	J	J: ±50ppm	G: ±25ppm, H: ±30ppm (see options)
(5)	Operating Temp.	C	I: -40~+85°C	C: -20~+70°C, I: -40~+85°C (see options)
(6)	Frequency	24M0	24M0: 24.00MHz	10M0 ~ 125M0 (M denotes decimal point)

DIMENSIONS AND RECOMMENDED PATTERN

PIN	PIN Layout
1	Input / Output
2	GND
3	Output / Input
4	GND



(Unit:mm)

AVAILABLE OPTIONS

Parameters	Part Number Options
Load Capacitance	R: Series Resonance, 3: 3pF ~ 8: 8pF, A: 10pF, B: 12pF, C: 15pF, D: 16pF, E: 18pF, F: 20pF, K: 22pF, G: 25pF, H: 30pF, L: 32pF
Frequency Tolerance	A: ±10ppm, C: ±15ppm, F: ±20ppm, G: ±25ppm, H: ±30ppm, J: ±50ppm
Stability vs Oper Temp.	A: ±10ppm, C: ±15ppm, F: ±20ppm, G: ±25ppm, H: ±30ppm, J: ±50ppm, K: ±100ppm
Operating Temperature	B: 0~+70C, A: -10~+60C, C: -20~+70C, K: -30~+85C, I: -40~+85C, R: -40~+105C

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

Ceramic SMD Crystal Unit

SMD 3.2 x 2.5mm Type

MX3 series

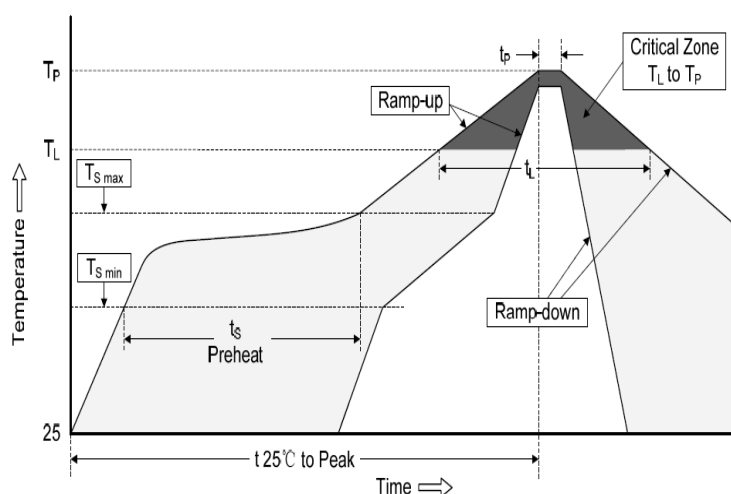
MERITEK

ELECTRICAL CHARACTERISTICS

Parameters		Characteristic
Frequency Range		10.00 ~ 125.00 MHz
Operation Mode	Fundamental	10.00 ~ 54.00 MHz
	3 rd Overtone	64.00 ~ 125.00 MHz (standard frequencies)
Load Capacitance		18 pF (see options)
Frequency Tolerance (at 25°C)		±30 ppm (see options)
Freq Stability over Oper Temp.		±50 ppm (see options)
Operating Temperature		-20 ~ +70°C (see options)
Storage Temperature		-55 ~ +125°C
Drive Level		100µW max. (10 typ.)
Aging		±3 ppm / year
Shunt Capacitance		7.0 pF max.
Insulation Resistance		500 MΩ min. (@100Vdc ±15V)
Equivalent Series Resistance	10.0 ~ 11.99 Fundamental	200 Ω max.
	12.0 ~ 15.99 Fundamental	120 Ω max.
	16.0 ~ 19.99 Fundamental	70 Ω max.
	20.0 ~ 29.99 Fundamental	50 Ω max.
	30.0 ~ 39.99 Fundamental	40 Ω max.
	40.0 ~ 54.00 Fundamental	35 Ω max.
	64.0 ~ 80.00 (3 rd OT)	120 Ω max.
	98.304 ~ 125.00 (3 rd OT)	80 Ω max.
Packing Unit		3,000 pcs / 7" Reel

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.