

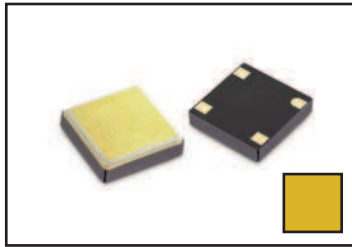
# EXTREME ENVIRONMENT

## SMD HIGH-TEMPERATURE PACKAGED QUARTZ CRYSTALS

### FMXTHC7S<sup>SERIES</sup>

Extreme Temperature  
Packaged Crystals

CERAMIC SMD 7x7



- 3.6 MHz to 125 MHz
- 0°C to +200°C Standard
- High-Shock & Vibration
- Stability from  $\pm 70$ ppm
- Surface Mount Alternative to TO-5

### SPECIFICATIONS



Parameter	Specification
Frequency Range	*3.60 MHz to 125.000 MHz
Operation Mode	See Operation Mode and ESR Table
Load Capacitance (CL)	18pf Std, 8 - 60pF and Series available
Frequency Tolerance	$\pm 50$ ppm @ 25°C, Custom Options available
Temperature Tolerance	$\pm 250$ ppm Std, $\pm 70$ ppm to $\pm 300$ ppm available
Operating Temperature	0 to 200°C Std, Custom Options available
Storage Temperature	-55°C to +240°C
Equivalent Series Resistance (ESR)	See Operation Mode and ESR Table
Shunt Capacitance (CO)	7pF max
Drive Level	50 $\mu$ W typical, 1mW max
Aging @ 25°C	$\pm 5$ ppm per year
Screening / Testing Available	per MIL-3098

All specifications subject to change without notice.

\*Note: For frequencies less than 3.6 MHz use Crystal Oscillator in 5x7mm or 7x7mm packages.

*Extremely Linear  
Temperature Sensors  
for High-Temperature  
Applications Now  
Available.*

Material
Ceramic Base with Gold Pads
Gold Plated Kovar Walls & Lid

FMI continuously performs life test on high temperature products. Inquire about the life test relevant to your specific application.

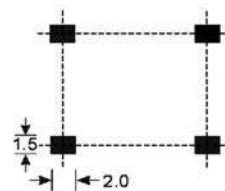
#### Operation Mode and ESR Table

Freq (MHz)	Mode	MAX ESR
3.6 - 4.1	Fundamental	150
4.2 - 4.9	Fundamental	100
5.0 - 7.9	Fundamental	80
8.0 - 14.9	Fundamental	50
15.0 - 30.9	Fundamental	25
31.0 - 42.0	Fundamental	35
24.0 - 59.9	3rd Overtone	40
60.0 - 81.9	3rd Overtone	50
82.0 - 104.0	3rd Overtone	60
105.0 - 125.0	3rd Overtone	70

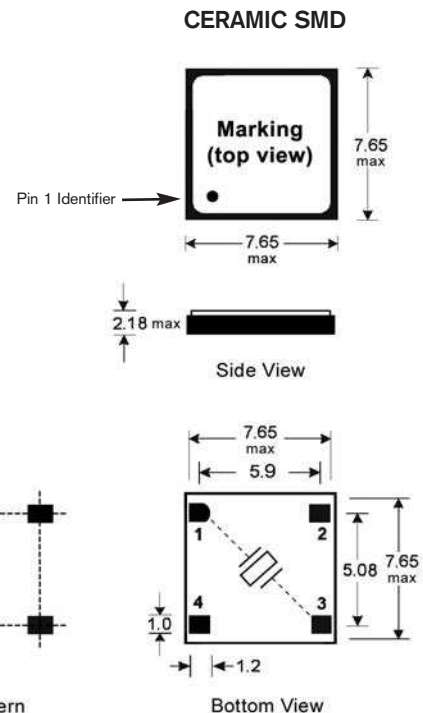
#### Pad Configuration

Pad	Function
1	Connect
2	No-Connect
3	Connect
4	No-Connect

Dimensions: mm



Land Pattern



- High Pullability
- Swept Quartz Option
- AT, IT, or SC Cut Crystals
- -150°C to +240°C Available

Issue 8 | 01112013

PLEASE CONTACT US FOR PART NUMBERS, HOW TO ORDER,  
ADDITIONAL PRODUCT SPECIFICATIONS & OR WITH YOUR CUSTOM REQUIREMENTS