

TC-Series Specifications



10.40D x 6.73H (mm)

PDI *TC-Series* is a cold-welded hermetically sealed quartz crystal in a TO5 through-hole package. This crystal, designed to meet your most demanding specification, is available in standard or custom frequencies and/or with customized parameters. PDI provides quick-turn sampling for your proto-typing needs, mass production capability, and competitive pricing.

ex) **TC—25000X—F—B—C—B—18—A—X***

FREQUENCY

08000X – 99999X =
8.0000MHz -
99.999MHz -
C10000 – C20000 =
100.00MHz -
200.00MHz -

MODE

F = Fundamental
3 = 3rd Overtone
5 = 5th Overtone

TOLERANCE

@ 25°C
A = ±10
B = ±25
C = ±50
S = Special

FREQUENCY STABILITY **

B = ±25
C = ±50
E = ±100
S = Special

OPERATING TEMPERATURE

A = 0 to +70°C
B = -20 to +70°C
D = -40 to +85°C
E = -55 to +125°C
S = Special

LOAD

08-99 = pF
SE = Series

CUT

A = AT-Cut
D = Doubly Cut

** - AT-Cut Only.

*(X) for standard or assigned for customization.

Parameter (AT-Cut)		Mode			Units
		Fundamental	3rd Overtone	5th Overtone	
Frequency Range		8.0000 to 40.0000	40.0000 to 120.0000	60.0000 to 200.0000	MHz
Frequency Tolerance	@ +25°C	Per Option			ppm
Temperature Range	Operating	Per Option			°C
	Storage	- 55 to +125			°C
Frequency Stability	Over Operating Temperature	Per Option			ppm
Equivalent Series Resistance (Maximum)	8.000000 to 10.000000 MHz	60			Ω
	10.000000 to 13.000000 MHz	50			
	13.000000 to 20.000000 MHz	30			
	20.000000 to 30.000000 MHz	20			
	25.000000 to 40.000000 MHz	25			
	40.000000 to 60.000000 MHz		40		
	60.000000 to 80.000000 MHz		30		
	80.000000 to 120.000000 MHz		30		
	60.000000 to 100.000000 MHz			50	
	100.000000 to 150.000000 MHz			40	
	125.000000 to 200.000000 MHz			40	
Drive Level (Typical)		100			uW
Shunt Capacitance (Maximum)		7.0			pF
Load Capacitance (Typical)		Per Option			pF
Aging (Maximum)	Per Year	±1.5			ppm
Seal Method		Cold Weld			
Insulation Resistance		500MΩ Minimum @100Vdc ±15V			

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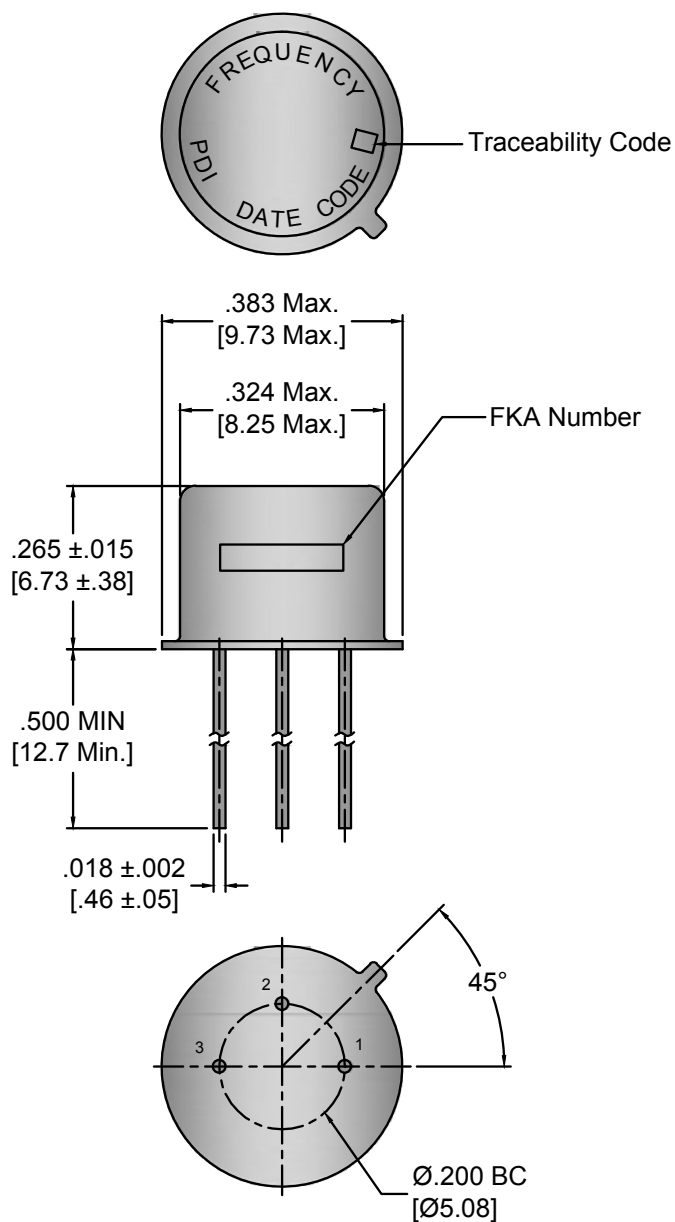
Parameter (Doubly Rotated Cuts) (SC, IT, FC)		Mode			Units
		Fundamental	3rd Overtone	5th Overtone	
Frequency Range		8.0000 to 40.0000	40.0000 to 120.0000	60.0000 to 200.0000	MHz
Frequency Tolerance	@ +25°C	Per Option			ppm
Temperature Range	Operating	Per Option			°C
	Storage	- 55 to +125			°C
Turning Point (Typical)		+55 to +105 (Mode, Cut, Frequency Dependent)			°C
Equivalent Series Resistance (Maximum)	8.000000 to 10.000000 MHz	80			Ω
	10.000000 to 13.000000 MHz	60			
	13.000000 to 20.000000 MHz	50			
	20.000000 to 30.000000 MHz	40			
	25.000000 to 40.000000 MHz	40			
	40.000000 to 60.000000 MHz		50		
	60.000000 to 80.000000 MHz		50		
	80.000000 to 120.000000 MHz		50		
	60.000000 to 100.000000 MHz			100	
	100.000000 to 150.000000 MHz			90	
	125.000000 to 200.000000 MHz			90	
Drive Level (Typical)		100			uW
Shunt Capacitance (Maximum)		7.0			pF
Load Capacitance (Typical)		Per Option			pF
Aging (Maximum)	Per Year	±1.0			ppm
Seal Method		Cold Weld			
Insulation Resistance		500MΩ Minimum @100Vdc ±15V			

TC-Series 9.73D x 6.73H (mm)

PACKAGE DIMENSIONS

Decimal XXX = $\pm .008$, XX = $\pm .02$ Metric [XXX = $\pm .20$], [XX = $\pm .50$]

PIN	CONNECTION
1	Crystal
2	Ground
3	Crystal



NOTES:

Other options are available, please consult factory.
 All product is supplied *RoHS* and *REACH* compliant.
 Product can be supplied on Tape and Reel, on reels of 1,000 units.
 Specifications subject to change without notice, last updated 4/1/13.