ISOTEMP RESEARCH, INC.

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MINIATURE CRYSTAL OVEN SPECIFICATION

This specification defines the operating characteristics of a component heater. Long term reliability and stability are assured through use of premium components.

REV	DESCRIPTION OF REVISION	BY	APV	DATE
-	Redrawn on new form was dwg. 115-037.	BTG	TST	02-10-2004

This M05VVTT specification covers input voltages from +5 VDC to +28 VDC and set point temperatures from +35°C to +95°C. The VV in the part number specifies the nominal operating voltage. If the voltage is less than +10 VDC, use a leading zero (i.e. for +5 VDC use VV = 05). The TT in the part number specifies the set point temperature in °C (i.e. for +75°C use TT = 75). VV and TT are used in this specification to describe the operation of this oven.

1. TEMPERATURE
   - 1.1. Set point: +TT °C (Customer specified) (+35°C to +95°C)
   - 1.2. Initial tolerance: < ±3°C @ +25°C

2. STABILITY
   - 2.1. Ambient: < ±3°C from -30°C to (TT-10)°C
   - 2.2. Voltage: < ±0.5°C/±10% change
   - 2.3. Warm-up: < ±1°C in 2 minutes @ +25°C (referenced to temperature at 15 minutes)

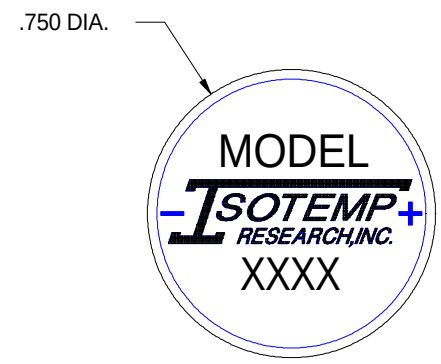
3. INPUT POWER
   - 3.1. Voltage: +VV VDC (Customer specified) (+5 VDC to +28 VDC)
   - 3.2. Voltage tolerance: ±10%
   - 3.3. Power
     - a. At turn on: < 6 Watts @ +25°C
     - b. Slope *: -0.024 Watts/°C typical

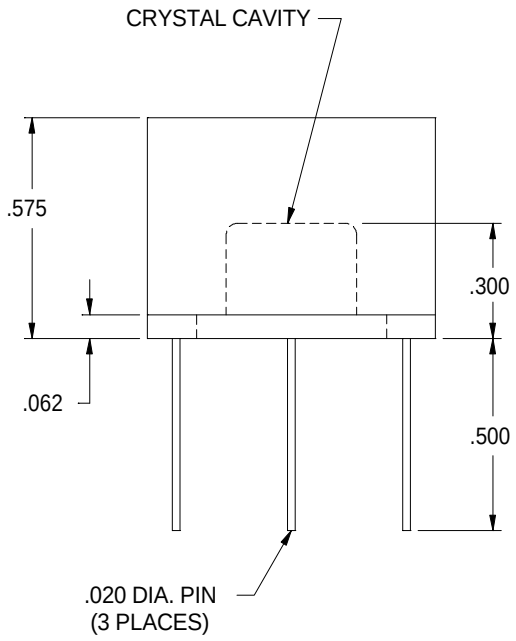
     To calculate the typical steady state power use the following formula.
     Pss = (TT - ambient temperature of unit)°C x 0.024 (Watts)

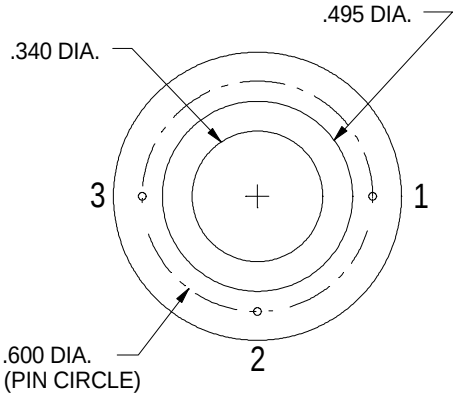
4. MECHANICAL
   - 4.1. Heated cavity holds the following crystals and semi-conductors: HC-35/U, T0-5, and T0-39
   - 4.2. Applicable series: M05 series
   - 4.3. Model number: M05VVTT (Customer specified)
   - 4.4. Outline drawing: 125-366

* In still air.

See ISOTEMP application note 146-003 for design considerations.







PIN CONNECTIONS	
PIN	FUNCTION
1	+VDC
2 (See Note 3)	TEMPERATURE ADJUST or NOT CONNECTED
3	0 VDC

NOTE:
1. CRYSTAL CAVITY IS CONNECTED TO 0 VDC
2. MARKING: LABEL
   MODEL = M05VVTT
   or
   MAJ05VV
   VV = VOLTAGE
   TT = SET POINT TEMPERATURE
   XXXX = DATE CODE
3. "TEMPERATURE ADJUST"
   FOR MAJ05VV MODELS
   "NOT CONNECTED"
   FOR M05VVTT MODELS

FORM NO. 120-081D

ISOTEMP RESEARCH,INC. OSCILLATORS CHARLOTTESVILLE, VIRGINIA

NAME: OUTLINE DRAWING
(M05 & MAJ05 SERIES)

CODE I.D. NO.	SCALE: 2:1	DATE: 05-07-91
31785	DWN. BY: WEW	APPR'D. BY: TST

LET	REVISION	BY	APP	DATE
B	REDRAWN, NEW FORM, REVISED NOTES.	LRB	DAG	08-15-00

TOLERANCES
UNLESS OTHERWISE SPECIFIED:
ANGLES: ±1 DEGREE
FRACTIONS: ±1/32 INCH
DECIMALS: .XX ±.015, .XXX ±.010

COVER MATERIAL: GLASS-FIBRE FILLED DIALLYL PHTHALATE
BASE MATERIAL: VALOX 420 SEO BLACK
PIN MATERIAL: KOVAR WITH 60/40 SOLDER ELECTROPLATE OVER NICKEL
FINISH: N/A
MARK: LABEL

DWG: 125-366
REV: B
SHT: 1 OF 1