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M05VVTT

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

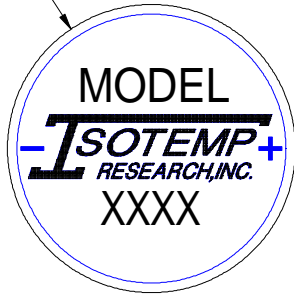
To calculate the typical steady state power
use the following formula.
 $P_{ss} = (TT - \text{ambient temperature of unit})^\circ\text{C} \times 0.024 \text{ (Watts)}$
4. MECHANICAL
 - 4.1. Heated cavity holds the following crystals and semi-conductors HC-35/U, T0-5, and T0-39
 - 4.2. Applicable series 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.

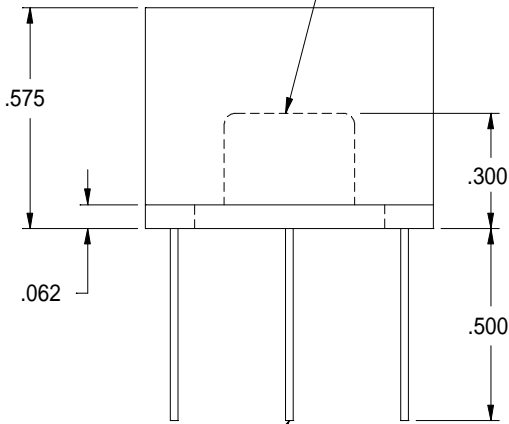
CHARLOTTESVILLE, VA USA www.isotemp.com	CODE ID	MODEL NO.	PAGE OF TOTAL		DWG. NO.	REV
	31785	M05VVTT	1	1	114-1182	-

.750 DIA.

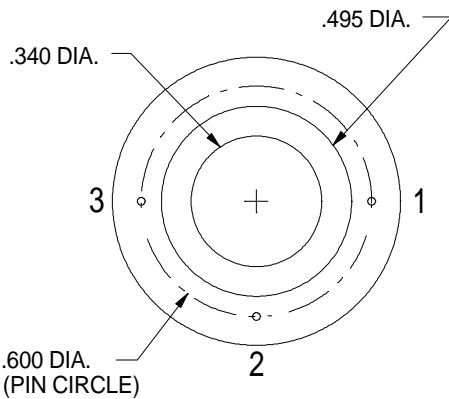


PIN CONNECTIONS	
PIN	FUNCTION
1	+VDC
2 (See Note 3)	TEMPERATURE ADJUST OR NOT CONNECTED
3	0 VDC

CRYSTAL CAVITY



.020 DIA. PIN
(3 PLACES)



NOTE:

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

FORM NO. 120-081D



OSCILLATORS

CHARLOTTESVILLE, VIRGINIA

NAME: OUTLINE DRAWING
(M05 & MAJ05 SERIES)

CODE I.D. NO.

31785

SCALE: 2:1

DWN. BY: WEW

DATE: 05-07-91

APPR'D. BY: TST

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

DIALYL PHTHALATE

BASE MATERIAL: VALOX 420 SEO BLACK

PIN MATERIAL: KOVAR WITH 60/40 SOLDER

ELECTROPLATE OVER NICKEL

LET

REVISION

BY

APP

DATE

FINISH: N/A

MARK: LABEL

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