



- Custom voltage input options.
- Custom temperature options.
- Supports HC-35/U, T0-05, and T0-39

Instrument Part Number: MAJ05 VV

MAJ05	VV
SERIES	VOLTAGE*
MAJ05	05 = 5V
	12 = 12V
	15 = 15V
	20 = 20V
	25 = 25V
	28 = 28V

Specifications:

\* Any Voltage from 5V-28V Available

Description	Min	Typ	Max	Unit
Set Temperature: (T <sub>S</sub> ) (See table on page 2)	+35	-	+95	°C
Set Point Tolerance:	-5	-	+5	°C
Temperature Stability: (-30°C ~ (T <sub>S</sub> - 10)°C)	-3	-	+3	°C
Voltage Stability:	-0.5	-	0.5	°C
Supply Voltage: (V <sub>S</sub> )	5	-	28	V
Power: (@ Warm-Up) (Slope)	-	-	6	W
		-0.024**		W/°C
Voltage Tolerance:	0.9 * V <sub>S</sub>	-	1.1 * V <sub>S</sub>	V
Warm Up: (@ 2 Minutes, 25°C, Referenced to 15 Minutes)	-1	-	1	°C

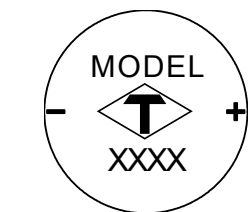
Supported Crystals/Semi-Conductors:

HC-35/U, T0-05, and T0-39

\* A 10°C buffer between ambient and the set temperature is required so the performance can be maintained.

\*\* To calculate the typical steady state power use the following formula where T<sub>A</sub> is the ambient temperature:

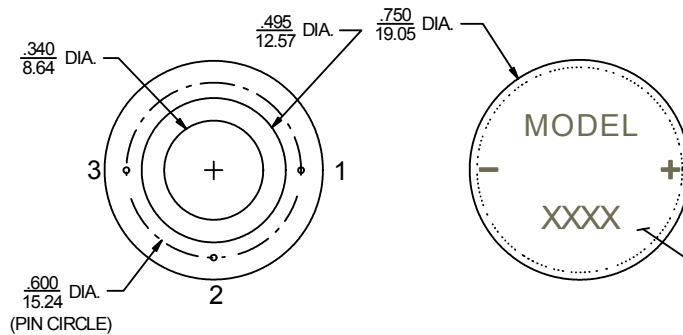
$$P_{SS} = (T_S - T_A) \times 0.024W$$



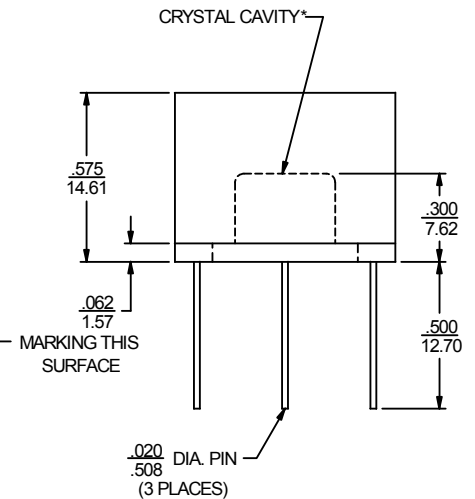
MARKING  
XXXX = Date Code

Pin #	Function
1	+VDC
2	TEMPERATURE ADJUST
3	0 VDC

INCH  
mm



\* CRYSTAL CAVITY connected to 0 VDC.





An external resistor between the TEMPERATURE ADJUST pin and the GND is used to set the oven temperature. The following table outlines the resistor required:

Set Temperature (°C)	Supply Voltage (V)								
	5	8	10	12	15	18	20	24	28
35	263.28	289.28	298.12	349.86	338.97	399.67	399.67	441.80	580.04
40	204.07	224.27	232.49	263.28	254.77	298.12	298.12	349.86	426.43
45	158.69	175.27	180.43	204.07	204.07	232.49	232.49	263.28	328.21
50	124.07	131.37	139.97	149.90	154.91	180.43	180.43	204.07	254.77
55	95.51	104.92	108.47	119.24	124.07	144.92	139.97	158.69	204.07
60	72.56	80.44	86.20	92.01	95.51	115.64	108.47	127.71	158.69
65	56.36	62.84	65.21	72.56	72.56	88.52	86.20	97.85	124.07
70	41.13	46.51	50.26	54.24	56.36	70.06	67.57	77.69	97.85
75	31.69	34.72	37.86	41.13	42.88	52.25	52.25	60.60	77.69
80	22.35	26.20	27.49	31.69	31.69	41.13	39.50	46.51	60.60
85	14.61	17.78	18.84	20.01	22.35	30.29	28.89	34.72	46.51
90	8.09	10.71	12.60	14.61	15.66	21.18	21.18	27.49	36.23
95	3.29	5.58	6.42	9.87	9.87	13.55	13.55	17.78	26.20
	<b>Required external resistor (kΩ)</b>								

To calculate resistor for temperature not on the chart use the following formula:

$$R = e^{(\ln(R_2/R_1) * (T_S - T_1) / (T_2 - T_1) + \ln(R_1))}$$

Where:

R = resistor value required for temperature  $T_S$ .

$T_S$  = Temperature desired

$T_2$  = Temperature just above  $T_S$

$R_2$  = Resistor value corresponding to  $T_2$

$T_1$  = Temperature just below  $T_S$

$R_1$  = Resistor value corresponding to  $T_1$