

Series RV6/382M
.5 Watt, Conductive Plastic Potentiometer



Series RV6/382M Electrical Specifications

Resistance Range
100 Ω to 5 Megohm, linear
500 Ω to 2.5 Megohm, non-linear

Resistance Tolerance
Linear, up to 1 Megohm $\pm 10\%$
Above 1 Megohm, $\pm 20\%$
Tapered, up to 250K Ω $\pm 10\%$
Above 250K Ω to 2.5 Megohm $\pm 20\%$

Power Rating
0.5 watt @ 70°C
Derated to zero power at 120°C.
Derate non-linear tapers by 50%. See Chart A, page 58.

Effective Rotation
265° +0° - 10°

Electrical Rotation
295° $\pm 3^\circ$

Tapers
See Chart B, page 58.

Taper Tolerance
 $\pm 20\%$ of the nominal resistance @ 50% $\pm 3\%$
mechanical rotation

End Resistance
Linear: 5 Ω maximum for resistances up to 750 Ω ;
10 Ω maximum for resistances 750 Ω and higher.
Non-Linear: High end of element, 1% of total resistance
or 5 Ω , same as for linear units.

Temperature Characteristics
See Chart C, page 58.

Dynamic Noise
Linear controls maximum initial noise level of 1% of
total resistance

Linearity
 $\pm 5\%$ independent

Dielectric Withstanding Voltage
750Vac for 60 seconds @ ATM
350Vac for 60 seconds @ 3.4 in Hg.

Working Voltage
350Vdc maximum, power not to exceed rating

Series RV6/382M Mechanical Specifications

Mechanical Rotation
295° $\pm 3^\circ$

Operating Torque
0.5 to 6 oz. in.
Shaft locking feature and jam nut tightened to 8lb. in.
Starting torque is 20 oz. in. minimum.

Description

The series RV6, style 382M, is a high-resolution, highly stable potentiometer for applications requiring miniaturization and reliability.

Features

- Shaft and mounting seals available
- Linear and audio tapers
- Wide range of standard values
- Made in accordance with MIL-R-94

Mechanical Specifications continued, next page

Stop Torque
3 lb. in. minimum

Weight
.368 oz. (10.5 gm)

Series RV6/382M Operational Specifications

Operating Temperature Range
-55°C to 120°C

Rotational Life
50,000 cycles

Figure 1
Chart A

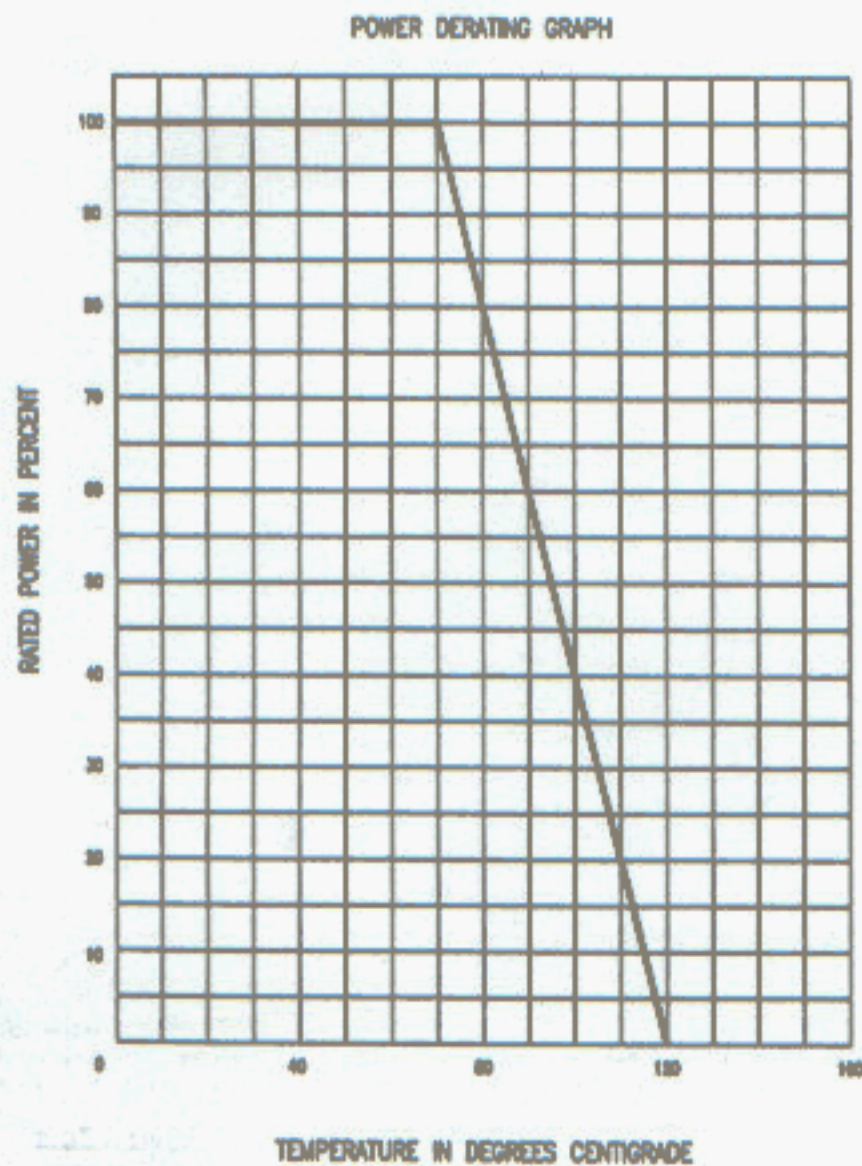
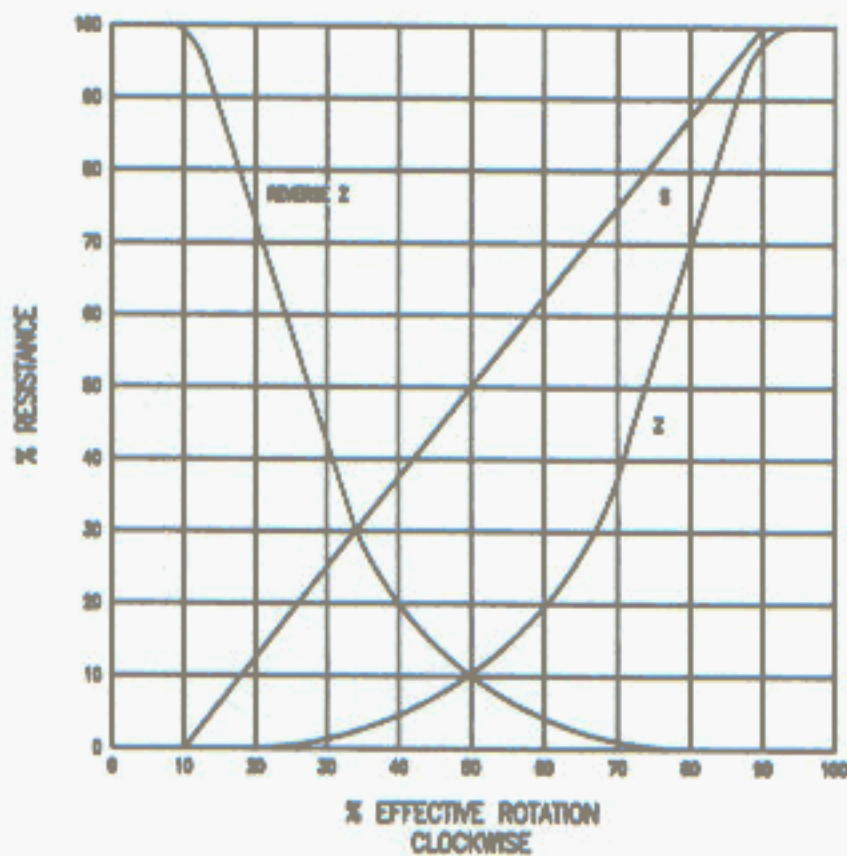


Figure 2
Chart B



Curves Standard

The "S" taper is linear, the change in resistance value being directly proportional to the degree of rotation. It can be used either as right-hand or left-hand taper.

The "Z" taper attains 10% resistance value at 50% of clockwise rotation (left-hand).

The reverse "Z" taper attains 10% resistance value at 50% of counter-clockwise rotation (right-hand).

For conformity and special output curves, consult Factory.

Figure 3
Chart C

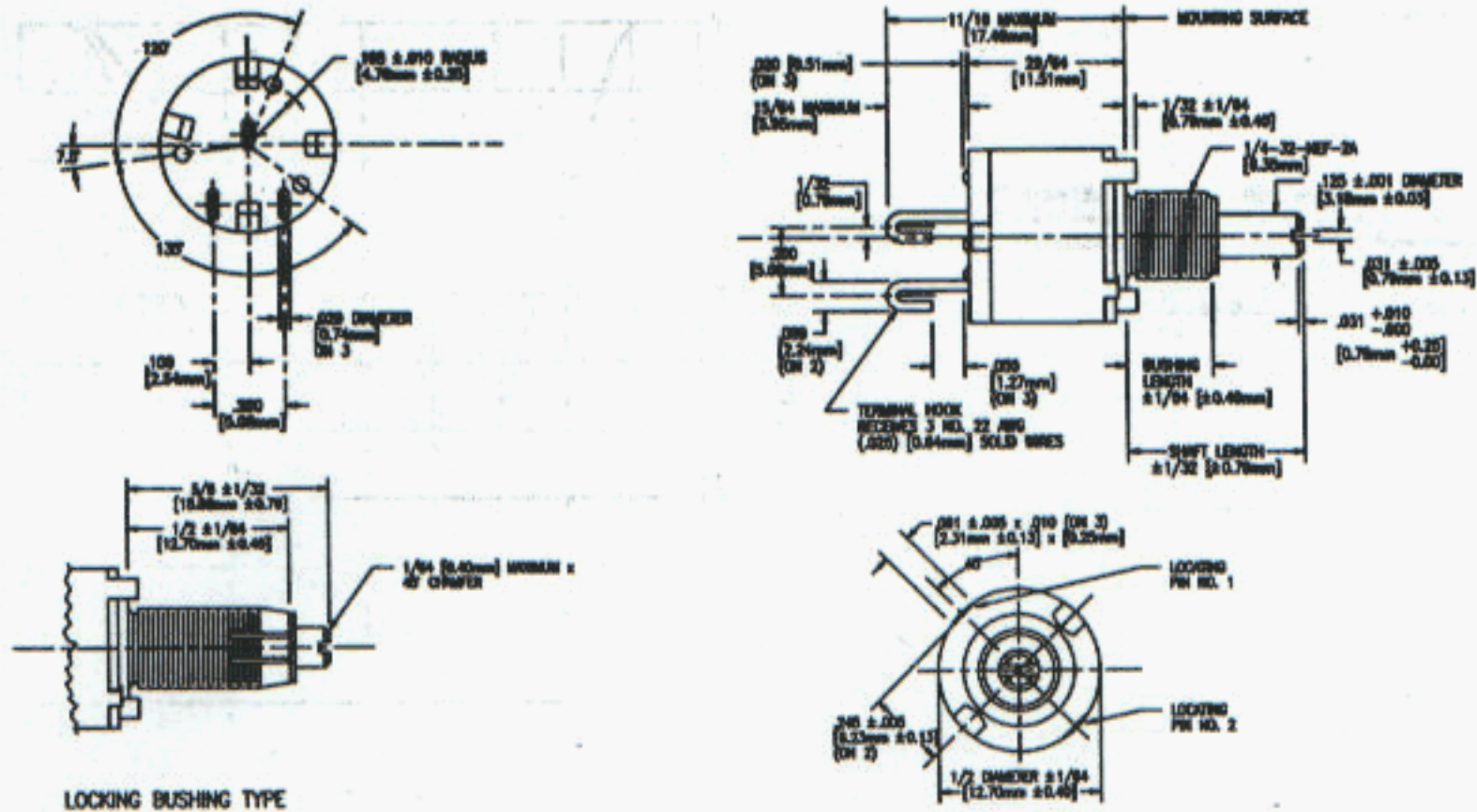
RESISTANCE TEMPERATURE CHARACTERISTICS

| NOMINAL RESISTANCE | MAXIMUM PERCENT TEMPORARY RESISTANCE FROM 25°C | | | | | | |
|--------------------|--|-------|------|-------|-------|--------|--------|
| | -55°C | -40°C | 0°C | +25°C | +85°C | +105°C | +120°C |
| 100 OHMS | ±5.0 | ±3.0 | ±1.5 | 0 | ±1.5 | ±2.5 | ±3.5 |
| 10K OHMS | ±5.5 | ±4.0 | ±2.0 | 0 | ±2.5 | ±3.0 | ±4.0 |
| 100K OHMS | ±5.5 | ±5.5 | ±3.0 | 0 | ±3.0 | ±4.0 | ±5.5 |
| 1 MEGOHMS | ±9.0 | ±8.0 | ±2.5 | 0 | ±3.5 | ±5.5 | ±7.0 |

FOR NON-LINEAR TAPERS, MULTIPLY CHART VALUES BY 1.25

Figure 4

Series RV6/382M Dimensions



LOCKING BUSHING TYPE

Series RV6/382M Standard Resistance Values

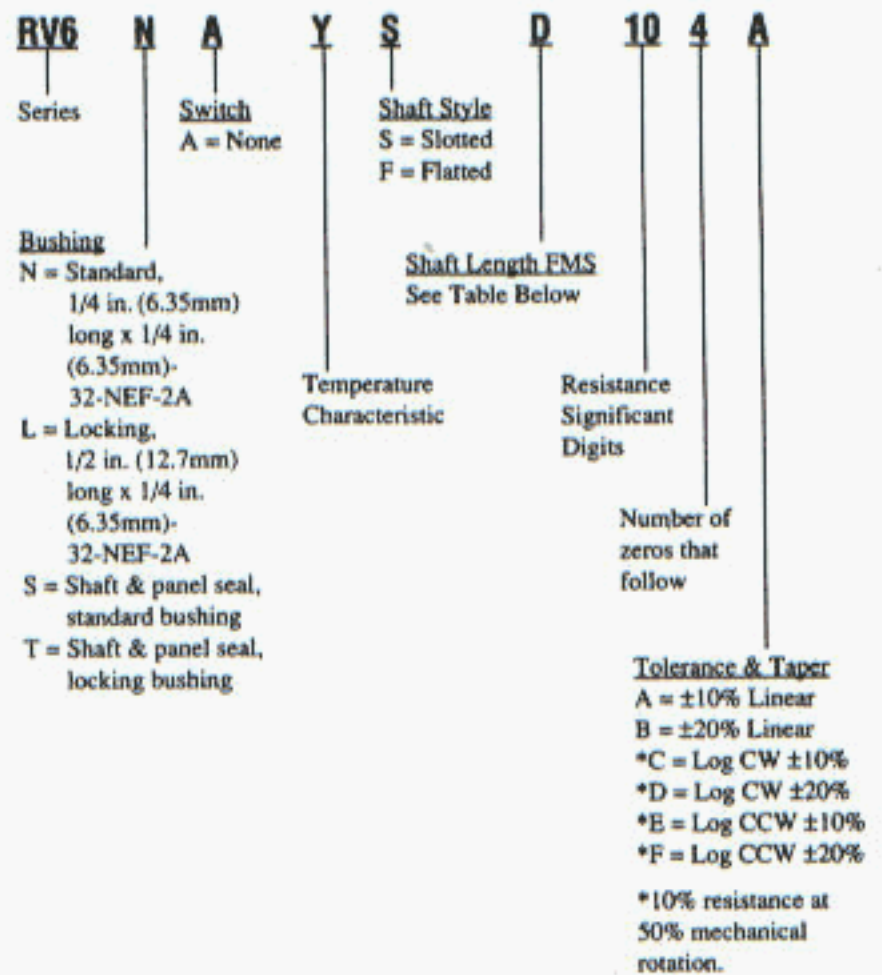
Note: Shaft and Mounting Seals Available On Special Order

| RV6NAY | | RV6LAY | |
|--------|------|--------|-------|
| SD | & SL | SA | & SD |
| 101A | 253A | 101A | 253A |
| 251A | 503A | 251A* | 503A |
| 501A | 104A | 501A | 104A |
| 102A | 154A | 102A | 154A* |
| 252A | 254A | 252A | 254A |
| 502A | 504A | 502A | 504A |
| 103A | 105A | 103A | 105A* |
| 153A | 205B | 153A | 205B* |
| | 255B | 255B | |
| | 505B | 505B | |

*Made-to-order. Please consult Factory.

Series RV6/382M How To Order

Example: **RV6-N-A-Y-S-D-10-4-A**



Shaft Length from Mounting Surface (FMS)

| Shaft Length Code | With 1/4 in. (6.35mm) Bushing N&S Styles | With 1/2 in. (12.7mm) Bushings L&T Styles |
|---------------------|--|---|
| A | 5/8 | 5/8 |
| B | 1/2 | N/A |
| D | 7/8 | 7/8 |
| L | 3/8 | N/A |
| N/A - Not available | | |