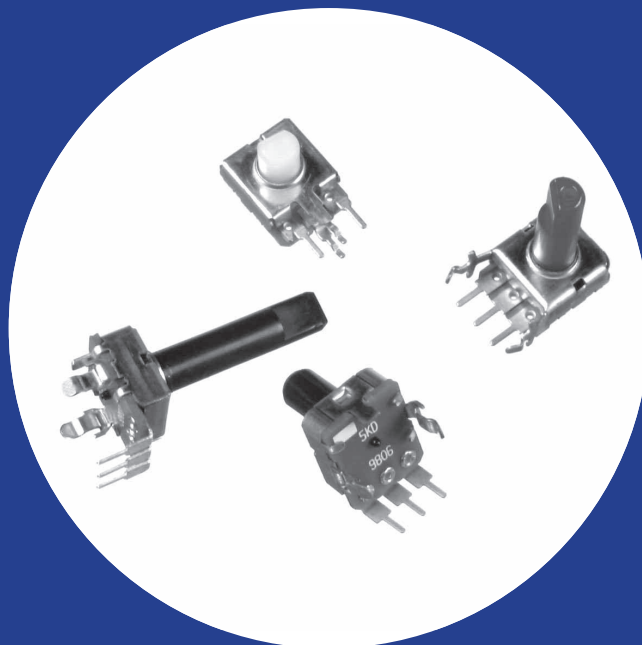


### Commercial 12mm Diameter Carbon Composition Rotary Potentiometer

#### Features

- Miniature 12mm size
- Low cost
- Snap-in bracket for PC board mounting
- Detent available
- Insulated shaft available
- RoHS compliant



### Electrical and Mechanical Specifications

#### Resistance Range

500 ohms through 1 Megohms

#### Resistance Tolerance

±30%, ±20%, ±10%

#### Power Rating

0.15 watts @ 50°C

#### Dielectric Strength

500 VDC for 1 minute

#### Maximum Operating Voltage

350 VDC

#### Insulation Resistance

100 Megohms minimum @ 250 VDC

#### Rotational Angle

Mechanical angle: 300°  
Effective angle: 280°

#### Rotational Torque

20 – 216 gf-cm

#### Stop Strength

5.76 kg-cm minimum (VR without detent)  
3 kg-cm minimum (VR with detent)

#### Mounting Information

P.C. board mounting  
Type "X": Shaft parallel to P.C. board  
Type "U": Shaft vertical to P.C. board  
Type "H": Same as "X" except hook terminals

#### Detent

Detent @ 50% rotation

#### Push-Pull strength on shaft

8 kg for 10 seconds

#### Rotational life

10K cycles

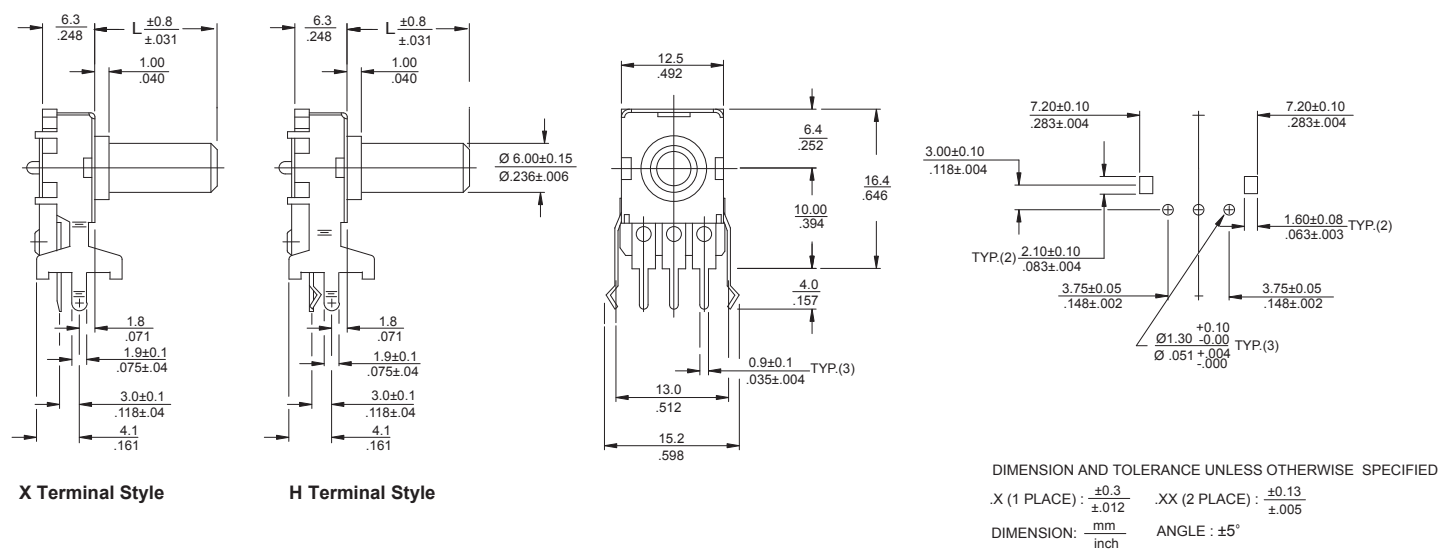
#### Operating temperature

-10°C ~ 80°C

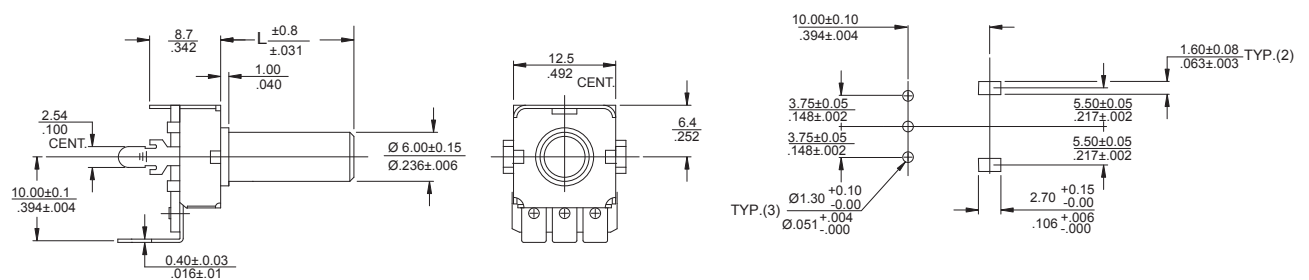
#### Solder Heat Resistance

260°C for 5 seconds

XM 296RE/ HM 296RE Molded Shaft, Shaft Parallel to P.C. Board



UM 296RE Molded Shaft, Shaft Perpendicular to P.C. Board



Ordering Information

**296**

**X**

**B**

**TERMINAL STYLE**  
X – PC  
U – PC FORMED TO REAR  
H – HOOK

**RESISTANCE CODE EXAMPLES**  

| CODE | RESISTANCE |
|------|------------|
| 501  | 500 OHMS   |
| 102  | 1K         |
| 252  | 2.5K       |
| 502  | 5K         |
| 103  | 10K        |
| 253  | 25K        |
| 503  | 50K        |
| 104  | 100K       |

**RESIST TOL**  
A –  $\pm 10\%$   
B –  $\pm 20\%$   
C –  $\pm 30\%$

**DETENT**  
N – NO DETENT  
C – CENTER DETENT

**SHAFTS AVAILABLE**  
(ALL SHAFTS .236" Dia. (6.0mm) except "E" - Diameter is .240" (6.1mm))  

| COVER               | TRIM                            |
|---------------------|---------------------------------|
| A – .640" (16.3mm)  | FLATTED .472"X.177" (12X4.5mm)  |
| B – .840" (21.3mm)  | FLATTED .472"X.177" (12X4.5mm)  |
| C – 1.031" (26.2mm) | FLATTED .472"X.177" (12X4.5mm)  |
| D – .540" (13.7mm)  | KNURLED .287"X.18T (7.3mmX18T)  |
| E – .265" (6.7mm)   | FLATTED .218"X.204" (5.5X5.2mm) |
| F – .640" (16.3mm)  | FLATTED .276"X.177" (7X4.5mm)   |
| G – .717" (18.2mm)  | FLATTED .276"X.177" (7X4.5mm)   |
| H – 1.035" (26.3mm) | FLATTED .276"X.177" (7X4.5mm)   |

**TAPER**  
1 – LINEAR  
2 – 10% AUD  
3 – 10% CCW AUD

# Mouser Electronics

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[296XD504B1N](#)