

# Model 44

## Cermet Trimming Potentiometer



### Features:

- Space saving SMD package for the most compact board designs
- Sealed to withstand aggressive water wash
- Long life—set and forget construction
- BI quality and reliability
- Available in top and side adjustment versions and J-Hook or gull wing termination



### Applications:

- Any application requiring adjustability or calibration
- Medical
- Consumer electronics

### Electrical

|                               |                                                      |
|-------------------------------|------------------------------------------------------|
| Standard resistance range     | 10 Ohms to 2 Megohms                                 |
| Standard resistance tolerance | ±10% (<100 Ohms = ±20%)                              |
| Input voltage                 | 300 Vdc max. or rms not to exceed power rating       |
| Slider current                | 100 mA max. or within rated power, whichever is less |
| Power rating                  | 0.25 Watts at 85°C derating to 0 at 150°C            |
| End resistance                | 1% or 2 Ohms max., whichever is greater              |
| Actual electrical travel      | 9 turns nominal                                      |
| Dielectric strength           | 600 Vrms                                             |
| Insulation resistance         | 1,000 Megohms minimum                                |
| Resolution                    | Essentially infinite                                 |
| Contact resistance variation  | 1% or 3 Ohm max., whichever is greater               |

### Environmental

|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| Seal                        | 85°C Fluorinert® (No Leaks)                       |
| Temperature coefficient     | ±100 ppm/°C (<100 Ohms = ±250 ppm/°C)             |
| Operating temperature range | -65°C to +150°C                                   |
| Thermal shock               | Five cycles -65°C to +150°C (2% ΔRT, 1% ΔVR)      |
| Moisture resistance         | Ten 24 hour cycles (2% ΔRT, IR 10 Megohms min.)   |
| Shock                       | 6 ms saw-tooth, 100 G's (1% ΔRT, 1% ΔVR)          |
| Vibration                   | 20 G's, 10 to 2,000 Hz (1% ΔRT, 1% ΔVR)           |
| Rotational life             | 200 cycles (3% ΔRT, 1% CRV)                       |
| Load life                   | 1,000 hours at 85°C & 0.25 Watts (2% ΔRT, 1% CRV) |
| Resistance to solder heat   | 260°C for 10 sec. (1% ΔRT)                        |
| Temperature exposure        | 215°C for 3 min. maximum (1% ΔRT)                 |
| Solderability               | Per MIL-STD-202, method 208                       |

#### General Note

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BI Technologies

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### Mechanical

|                  |                              |
|------------------|------------------------------|
| Mechanical stops | Clutch action, both ends     |
| Torque, starting | 3 oz.-in. max. (0.021 N-m)   |
| Weight           | 0.01 oz. nominal (0.3 grams) |

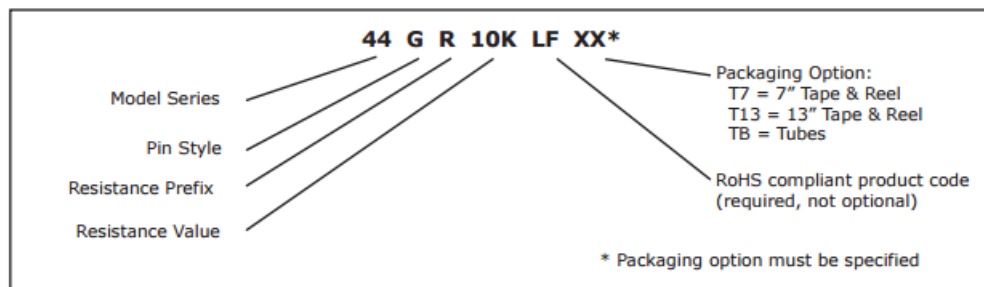
### Packaging

Standard: Embossed Tape & Reel. All units oriented with #1 pin to the right of the direction of feed.

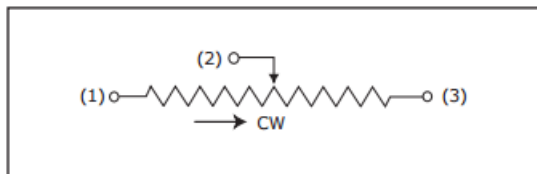
|      | Pin Style  | 13" Reel       |             | 7" Reel     |            |
|------|------------|----------------|-------------|-------------|------------|
|      |            | G & J          | W           | G & J       | W          |
| Tape | Width =    | 12 mm          | 16 mm       | 12 mm       | 16 mm      |
|      | Sprocket = | 4 mm pitch     | 4 mm pitch  | 4 mm pitch  | 4 mm pitch |
|      | Capacity = | 1,000 units    | 1,000 units | 500 units   | 250 units  |
| Reel | Diameter = | 13" (330.2 mm) |             | 7" (178 mm) |            |

Option: Anti-static tubes. All units oriented with #1 pin to same side. Tube capacity = 100 units.

### Ordering Information



### Circuit Diagram



#### General Note

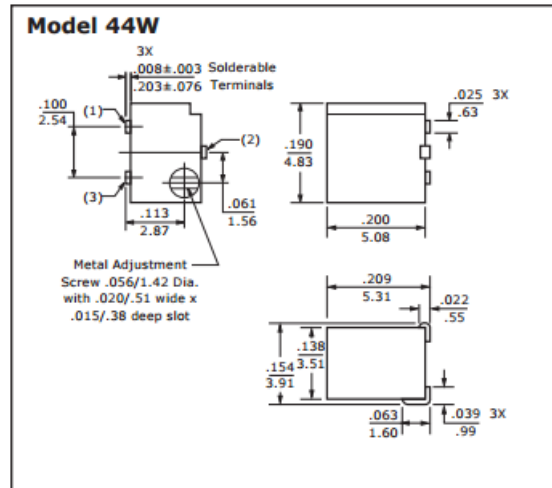
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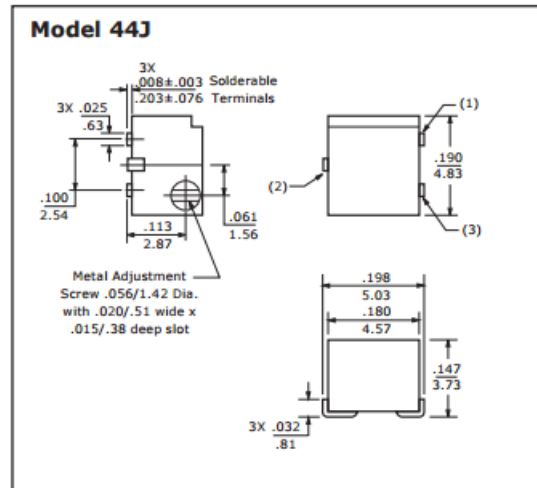
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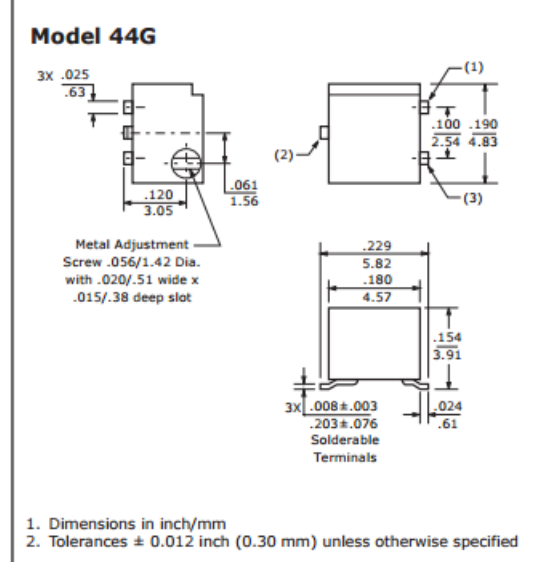
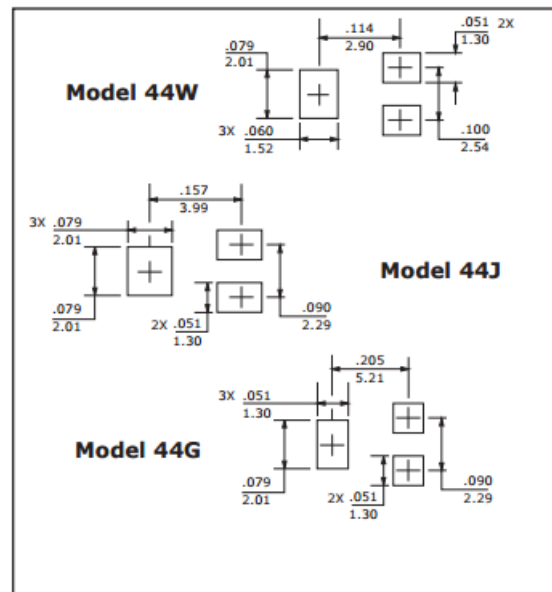
### Top Adjustment



### Side Adjustment



### Solder Pad Layout



### Standard Resistance Values

|    |     |    |     |      |      |      |
|----|-----|----|-----|------|------|------|
| 10 | 100 | 1K | 10K | 50K  | 250K | 2Meg |
| 20 | 200 | 2K | 20K | 100K | 500K |      |
| 50 | 500 | 5K | 25K | 200K | 1Meg |      |

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