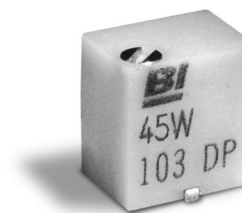


# Model 45

## 4mm Square High Resolution - 15 Turn Surface Mount Cermet Trimming Potentiometer



### FEATURES AND BENEFITS

- High resolution
- 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, J-Hook or gull wing termination, and optional extended shaft

### 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	15 turns nominal
Dielectric Strength	600 Vrms
Insulation Resistance	1,000 Megohms Min.
Resolution	Essentially infinite
Contact Resistance Variation	1% or 3 Ohms 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 sawtooth, 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. Max. (1% ΔRT)
Solderability	Per MIL-STD-202, Method 208

Specifications subject to change without notice.  
Fluorinert® is a registered trademark of 3M Company.

**Pb** **RoHS 2**  
**compliant**

**BI Technologies Corporation**  
4200 Bonita Place, Fullerton, CA 92835 USA  
Phone: 714 447 2345 Website: [www.bitechnologies.com](http://www.bitechnologies.com)  
September 5, 2013

 **electronics**  
BI Technologies

# Model 45

## 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)

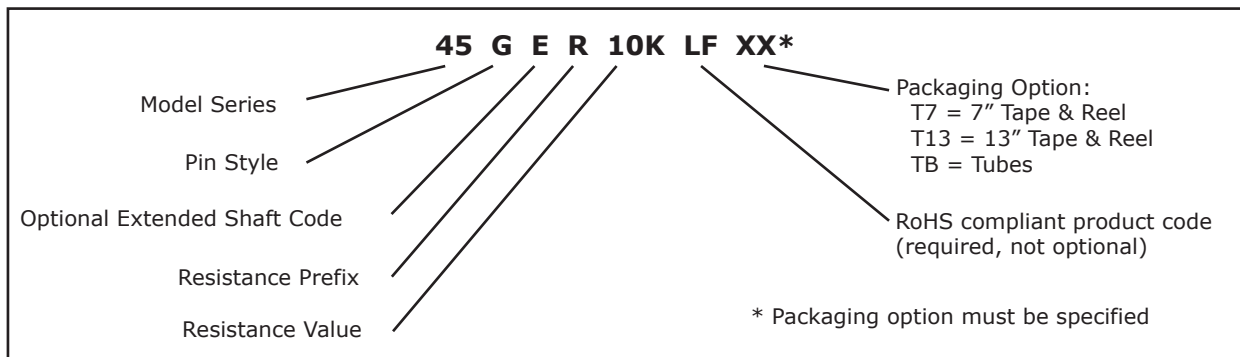
## PACKAGING

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

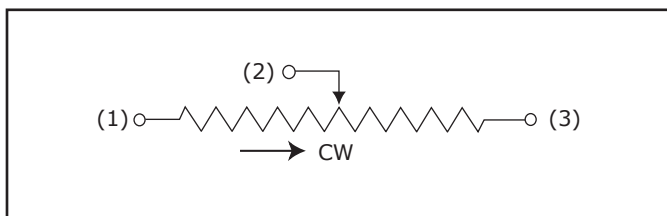
13" Reel				7" Reel	
	Pin Style	G & J	W	G & J	W
Tape	Width =	12 mm	16 mm	12 mm	16 mm
	Sprocket =	4 mm pitch	4 mm pitch	4 mm pitch	4 mm pitch
	Capacity =	1,000 units	1,000 units	500 units	250 units
Reel	Diameter =	13" (330.2 mm)		7" (178 mm)	

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

## ORDERING INFORMATION



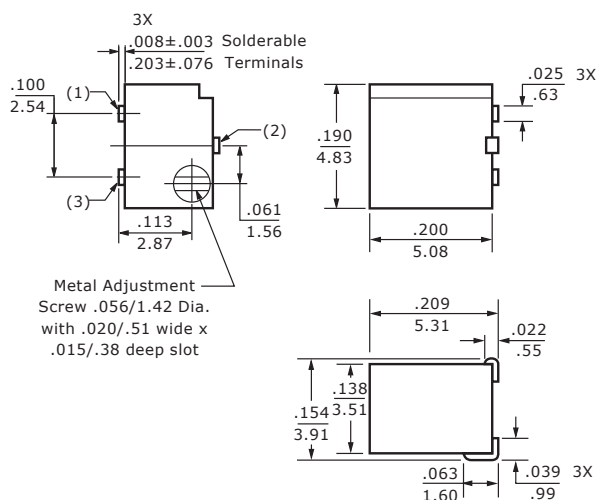
## CIRCUIT DIAGRAM



# Model 45

## TOP ADJUSTMENT

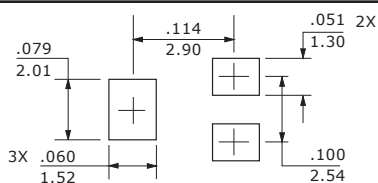
### Model 45W



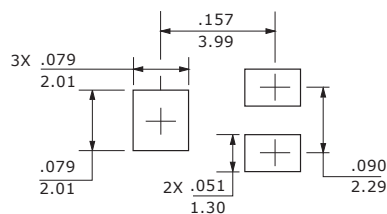
1. Dimensions in inch/mm
2. Tolerances  $\pm 0.012$  inch (0.30 mm) unless otherwise specified

## SOLDER PAD LAYOUT

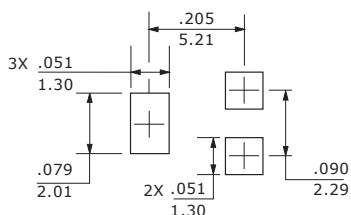
### Model 45W



### Model 45J

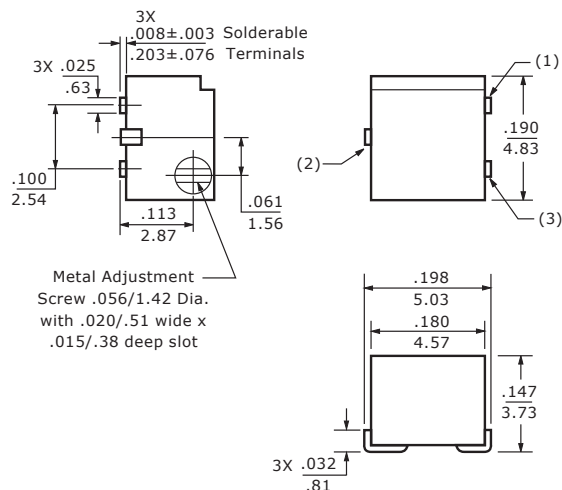


### Model 45G

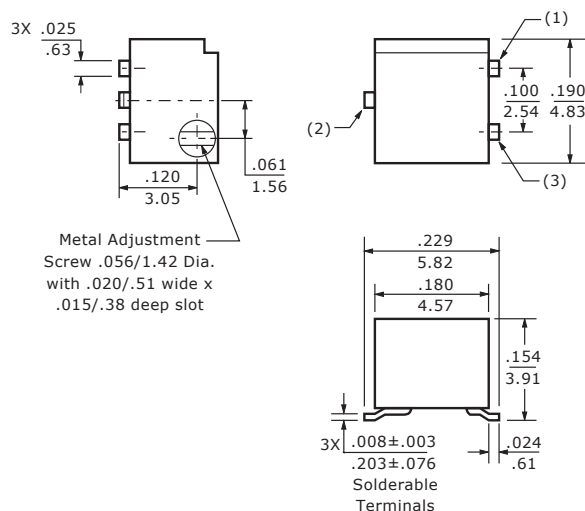


## SIDE ADJUSTMENT

### Model 45J

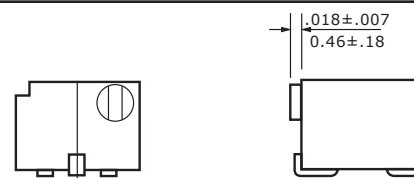


### Model 45G



## EXTENDED SHAFT OPTION

Available for all model  
45 pin styles: 45G,  
45J, and 45W



Style 45JE shown.

## 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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