

# BI 45 Potentiometer Datasheet

<http://www.manuallib.com/bi/45-potentiometer-datasheet.html>

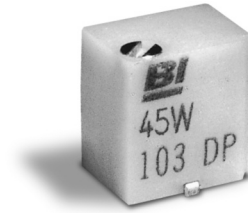
Standard Resistance Range 10 Ohms to 2 Megohms  
Standard Resistance Tolerance  $\pm 10\%$  (<100 Ohms =  $\pm 20\%$ )  
Input Voltage 300 Vdc Max. or rms not to exceed power rating  
Slider Current 100 mA Max. or within rated power, whichever is less  
Power Rating 0.25 Watts at 85°C derating to 0 at 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

ManualLib.com collects and classifies the global product instruction manuals to help users access anytime and anywhere, helping users make better use of products.

<http://www.manuallib.com>

# 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



Model 45 page 1 of 3

# 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)

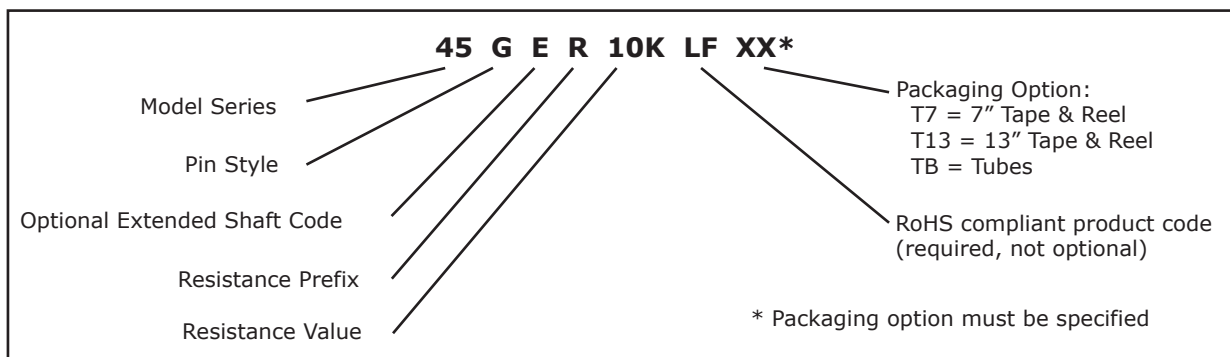
## PACKAGING

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

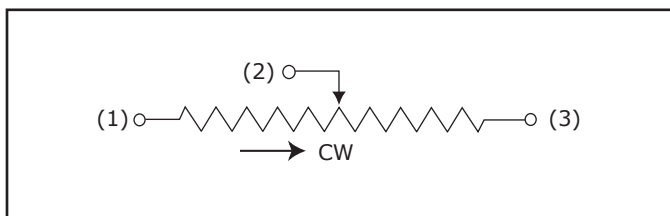
13" Reel				7" Reel	
	Pin Style	G & J	W	G & J	W
Tape	Width =	12 mm	16 mm	12 mm	16 mm
	Sprocket =	4 mm pitch	4 mm pitch	4 mm pitch	4 mm pitch
	Capacity =	1,000 units	1,000 units	500 units	250 units
Reel	Diameter =	13" (330.2 mm)		7" (178 mm)	

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

## ORDERING INFORMATION



## CIRCUIT DIAGRAM



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

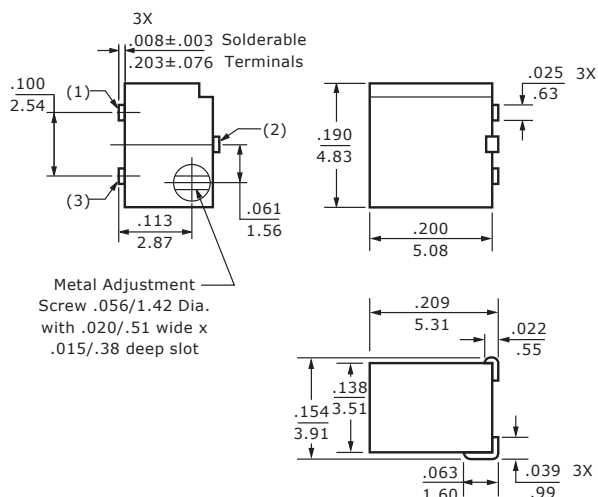
Model 45 page 2 of 3



# Model 45

## TOP ADJUSTMENT

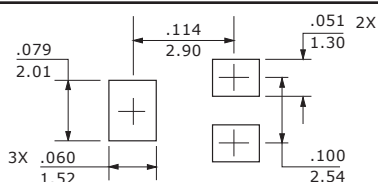
### Model 45W



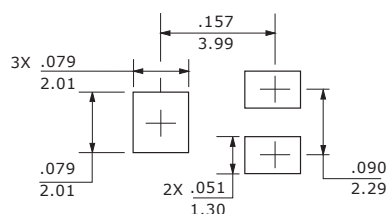
1. Dimensions in inch/mm
2. Tolerances  $\pm 0.012$  inch (0.30 mm) unless otherwise specified

## SOLDER PAD LAYOUT

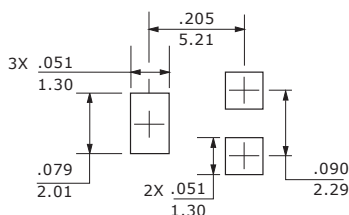
### Model 45W



### Model 45J

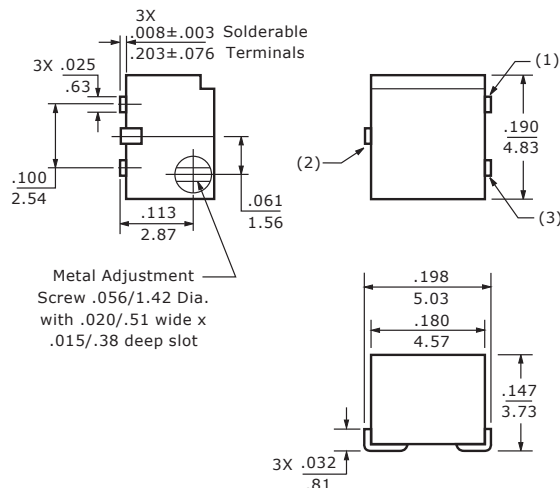


### Model 45G

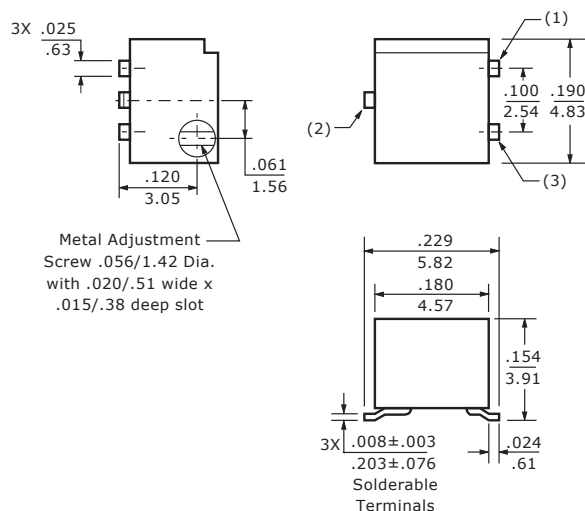


## SIDE ADJUSTMENT

### Model 45J

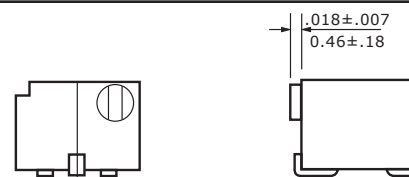


### Model 45G



## 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	

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

Model 45 page 3 of 3

