# 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	$\pm 100 \text{ ppm/°C}$ (<100 Ohms = $\pm 250 \text{ ppm/°C}$ )
Operating Temperature Range	-65°C to +150°C
Thermal Shock	Five cycles $-65^{\circ}$ C to $+150^{\circ}$ C (2% $\Delta$ RT, 1% $\Delta$ VR)
Moisture Resistance	Ten 24 hour cycles (2% $\Delta$ RT, 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.



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# Model 45

#### MECHANICAL

Mechanical Stops	Clutch action, both ends
Torque, Starting	3 ozin. Max. (0.021 N-m)
Weight	0.01 oz. nominal (0.3 grams)

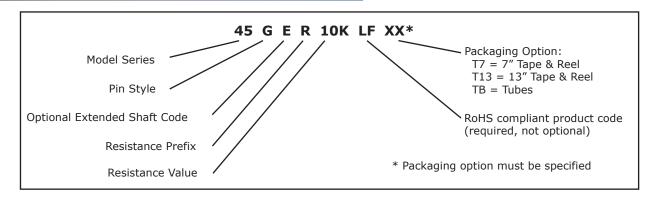
### PACKAGING

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

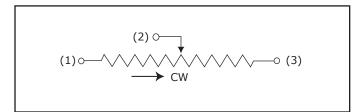
		13" Reel		7″ Reel	
	Pin Style	G & J	w	G & J	w
Таре	Width =	12 mm	16 mm	12 mm	16 mm
	Sprocket =	4 mm pitch	4 mm pitch	4 mm pitch	4 mm pitch
	Capacity =	1,000 units	1,000 units	500 units	250 units
Reel	Diameter =	13" (330.2 mm)		7″ (17	8 mm)

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: <u>www.bitechnologies.com</u> June 26, 2012

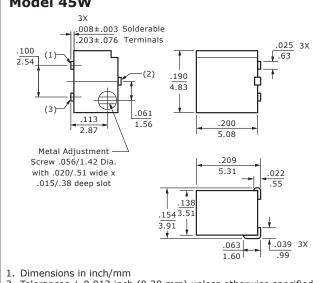


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# Model 45

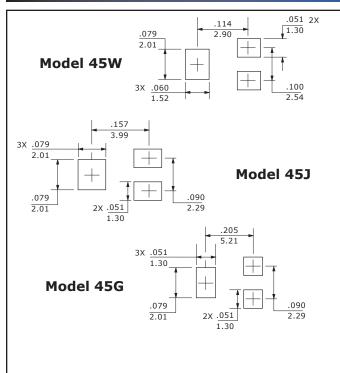
# **TOP ADJUSTMENT**

### Model 45W



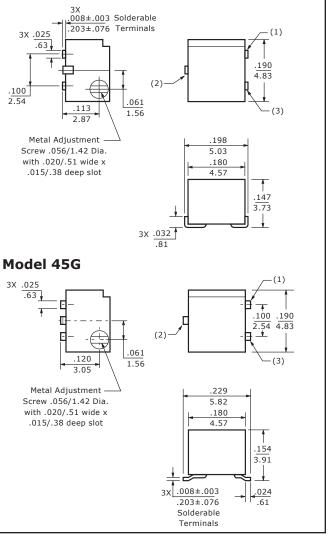
2. Tolerances  $\pm$  0.012 inch (0.30 mm) unless otherwise specified

# **SOLDER PAD LAYOUT**

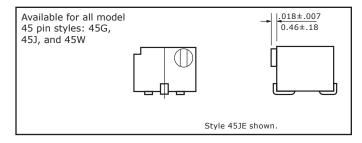


## SIDE ADJUSTMENT

#### Model 45J



#### **EXTENDED SHAFT OPTION**



## **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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