

## Models 3006, 3007, 3010, & 3014

Manual Step, Ruggedized SMA Connectors

DC to 2.5 GHz  
1 Watt



### Features

- /// **New Models** - Models 3053 & 3054 offer an extended frequency range to 6 GHz.
- /// **High Reliability** - Repeatability better than 0.1 dB over frequency range and life. Weinschel patented detent mechanism, tested to 1,000,000 operations at +75°C, operates dependably even down to -40°C.
- /// **Product Uniformity** - High volume fabrication techniques, including injection molding, stamping, broaching and thick film printing ensure a cost effective and uniform product.
- /// **Low Frequency Sensitivity** - Typically 0.1 to 0.2 dB up to 2.5 GHz.
- /// **Shock Resistant** - 100% spring contact system withstands mechanical and thermal shock and eliminates the need for epoxy or solder.
- /// **Wide Selection** - Wide choice of attenuation ranges and increments in standard stock models. Single and dual drum configurations available.
- /// **Knob Included** - Knobs for both single and dual drum models are included with every attenuator. Characters are screened on the face of the knob insert which is coated with a clear layer of epoxy for protection.

### Special Configurations

Some modifications to the basic configuration of the 3000 Series can be made during manufacturing. Examples of these special configurations are shafts having special lengths and ends; clockwise shaft rotation; modified mounting arrangements; and provisions for add-on items such as concentric potentiometer and ganged switches.

### Specifications

NOMINAL IMPEDANCE: 50 Ω

FREQUENCY RANGE: FREQUENCY RANGE:

Models 3006, 3014: DC to 1.25 GHz

Models 3007, 3010: DC to 2.5 GHz

INCREMENTAL ATTENUATION RANGE/STEPS:

Model 3006: 0-100 dB in 10 dB steps

Model 3007: 0-10 dB in 1 dB steps

Model 3010: 0-70 dB in 1 dB steps

Model 3014: 0-110 dB in 1 dB steps

POWER COEFFICIENT: < 0.006 dB/dB/watt

TEMPERATURE COEFFICIENT: 0.0004 dB/dB/ °C

TEMPERATURE RANGE:

Operating: -40°C to +65°C

Non-Operating: -54°C to +85°C

### ATTENUATION ACCURACY:

Model	Accuracy
3006	± 0.3 dB or 1% up to 60 dB ± 2% to 100 dB
3007	± 0.3 dB
3010	± 0.3 dB up to 10 dB ± 0.3 dB or 1.5% to 60 dB ± 2 % to 70 dB
3014	± 0.3 dB up to 10 dB ± 0.3 dB or 1.5% to 60 dB ± 3% to 110 dB

**POWER RATING:** 1 watts **average** @ 25°C ambient temperature, derated linearly to 0 watts @ 65°C. 100 watts **peak** (5 μsec pulse width; 0.5 % duty cycle).

**CONNECTOR:** SMA female connector per MIL-STD-348 interface dimensions - mate nondestructively with MIL-C-39012 connector.

**SHAFT ROTATION:** counter clockwise for increasing attenuation

**STEP ANGLE:** 32.7°

**DRUM CONFIGURATIONS:**

Single Drum: 3006, 3007

Dual Drum: 3010, 3014

## Specifications-Con't

### MAXIMUM SWR & ZERO INSERTION LOSS:

Model	Frequency (GHz)	SWR	Loss (dB)
3006	dc - 1.25	1.20	< 0.2
3007	dc - 2.5	1.30	< 0.3
3010	dc - 2.5	1.35	< 0.7
3014	dc - 1.25	1.30	< 0.5

**INCREMENTAL PHASE SHIFT:** ~0.25° per dB x f(GHz)

**CONSTRUCTION:** Shafting and external hardware and connector shells: CRES Type 303, per ASTM-A582 passivated per QQ-P-35. Housing: AL ALLOY Gold Flash. Knob is included with each unit.

**TEST DATA:** Test data is available at additional cost.

**WEIGHT:** Single drum: Net 125 g (4.4 oz)  
Dual drum: Net 201 g (9.9 oz)

**SWITCHING LIFE:** 1,000,000 steps

**REPEATABILITY:** ±0.1 dB over frequency range and rated life

**ROTATION STOPS:** Supplied on 10 dB step drums (not supplied on 1 dB drums).

### MODEL NUMBER DESCRIPTION:

Example:

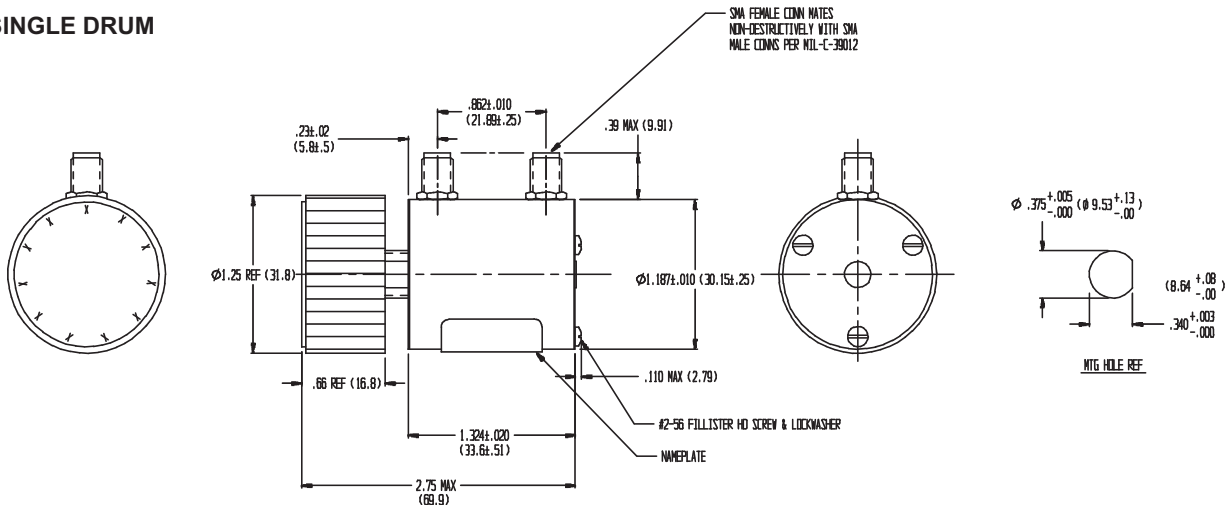
**3010 - 100**

Basic Model Number

Additional Options no longer available. Add -100 Only!

## PHYSICAL DIMENSIONS:

### SINGLE DRUM



### DUAL DRUM

