

# Sprague-Goodman

ENGINEERING BULLETIN

SG-660B

Supercedes SG-660A

## AIRTRIM® AIR DIELECTRIC MULTITURN TRIMMER CAPACITORS

### APPLICATIONS

Designed for VHF, UHF and microwave applications: amplifiers, oscillators, filters, radar, cable TV, mobile radios and RF appliances. Suitable for military and aerospace environments.

### FEATURES

- High Q
- Fourteen standard mounting styles, including surface mount
- Excellent stability
- Designed to meet MIL-C-14409D
- Multiturn resolution

### SPECIFICATIONS

Operating Temperature Range: -65° to +125°C

Working Voltage: 250 VDC

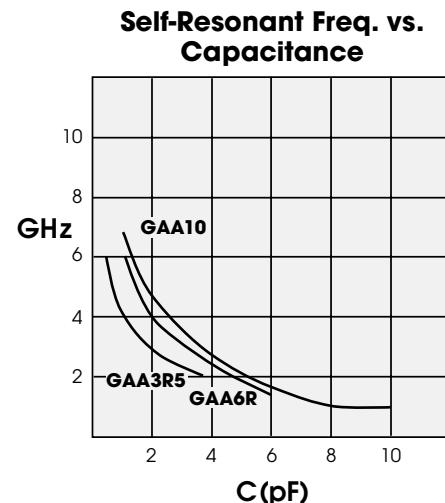
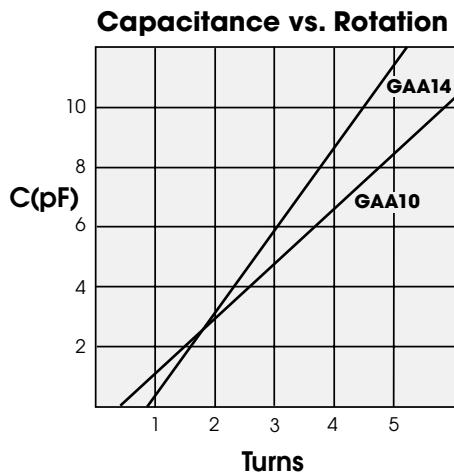
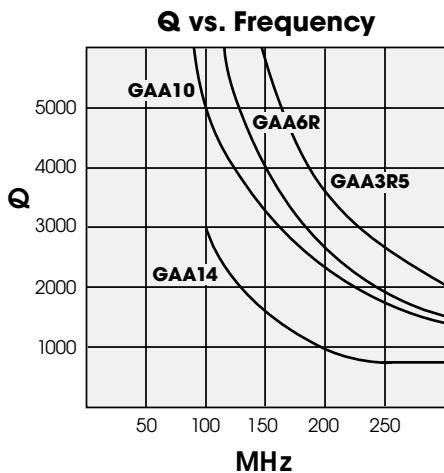
Test Voltage: 500 VDC

Insulation Resistance:  $>10^6$  Megohms

Contact Resistance: <0.01 Ohms



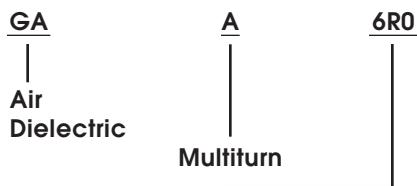
Q: >5000 at 100 MHz  
Vibration: 60 g, 10 to 2000Hz  
Shock: 1500 g, 0.5 ms  
Constructed with 300°C solder



**Sprague-Goodman Electronics, Inc.**

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## PART NUMBERING SYSTEM



**Maximum Rated Capacitance —** expressed in pF by three digits. The first two are significant figures; the last specifies the number of zeros that follow. The letter R indicates a decimal point.

**01**

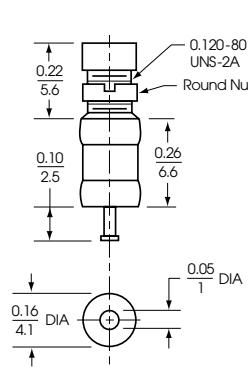
### Mounting Modifications

- |   |   |
|---|---|
| 01 — Panel mount, turret                          | 09 — Vertical surface mount (wide lead)       |
| 02 — Panel mount, lug                             | 10 — Vertical turret and lugs (wide double)   |
| 03 — Panel mount, threaded stud                   | 11 — Vertical turret and lugs (narrow double) |
| 04 — PC mount, 3 lugs (1 stator, 2 rotor)         | 12 — Vertical turret and lug (narrow single)  |
| 05 — Horizontal surface mount                     | 13 — PC mount, 2 lugs                         |
| 06 — Vertical mount, turret and lug (wide single) | 14 — Vertical surface mount (narrow lead)     |
| 07 — Vertical mount, stud and lug (wide single)   |   |
| 08 — Vertical mount, through board                |   |

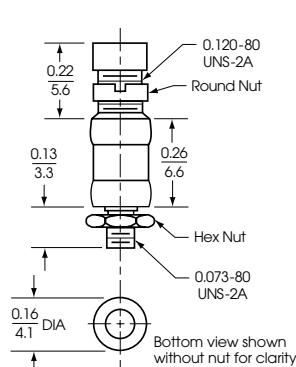
## 0.35-3.5 pF CAPACITANCE RANGE

- Torque: 0.3 to 3.0 oz-in (22 to 216 g-cm)
- Temperature Coefficient:  $\pm 30 \text{ ppm}/^\circ\text{C}$
- Self-Resonant Frequency: > 6 GHz at min capacitance

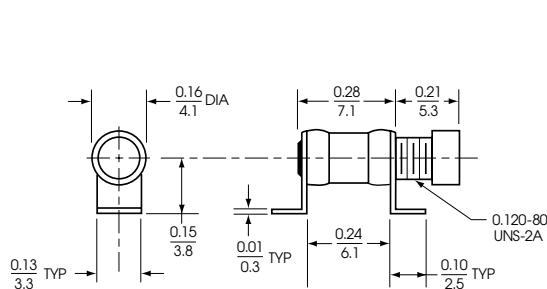
Dimensions are in/mm  
Adjust screw slot: 0.060/1.5 x 0.016/0.41



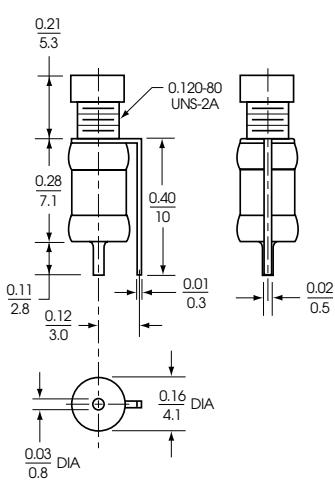
GAA3R501



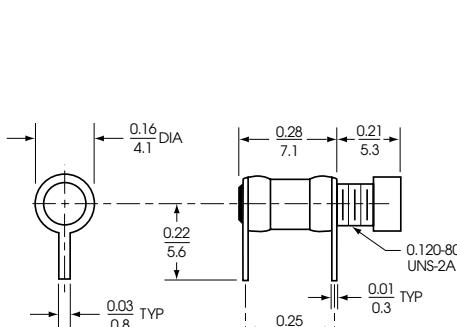
GAA3R503



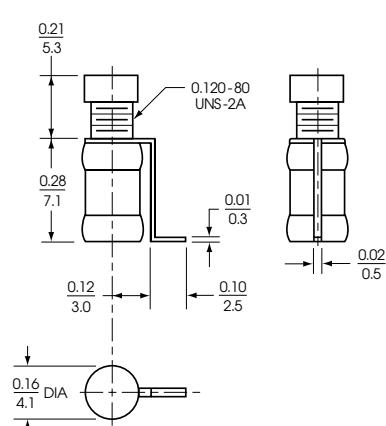
GAA3R505



GAA3R512

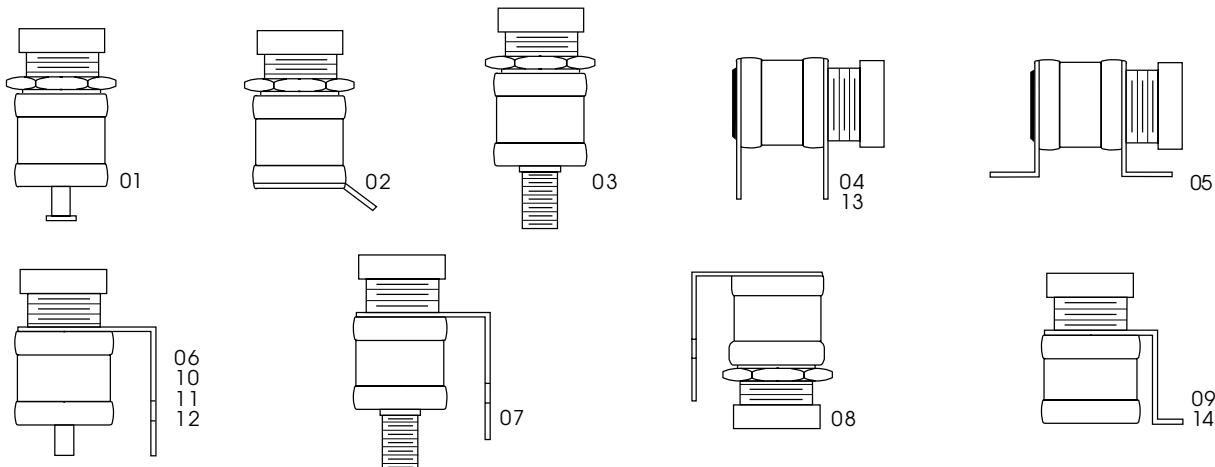


GAA3R513



GAA3R514

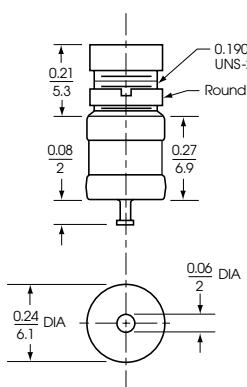
**Not to scale.**



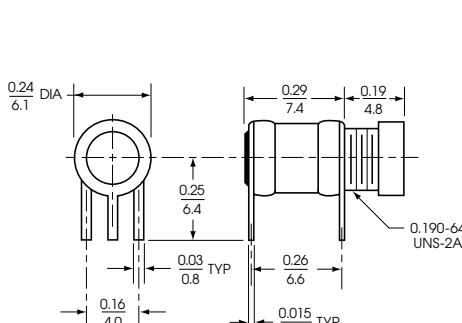
## 0.6-6.0 pF CAPACITANCE RANGE

- Torque: 0.4 to 4.0 oz-in (29 to 288 g-cm)
- Temperature Coefficient:  $\pm 15 \text{ ppm}/^\circ\text{C}$
- Self-Resonant Frequency: >6GHz at min capacitance

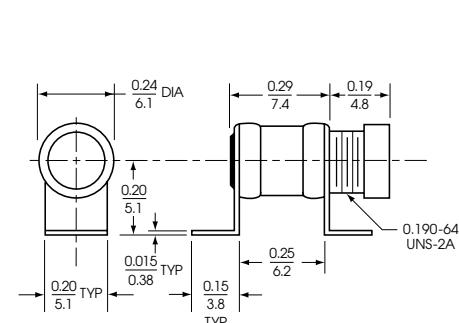
Dimensions are in/mm  
Adjust screw slot: 0.13/3.3 x 0.020/0.51



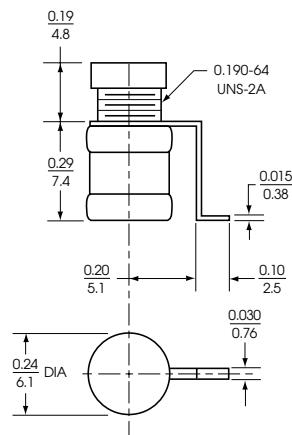
GAA6R001



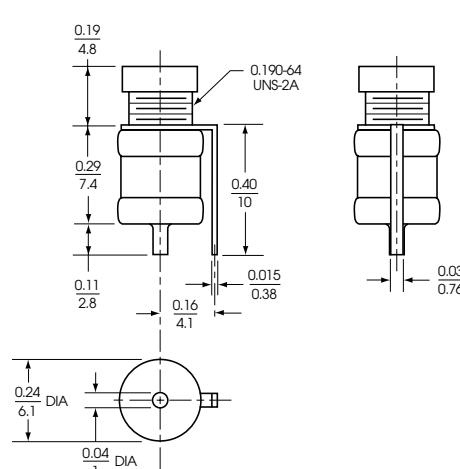
GAA6R004



GAA6R005



GAA6R014

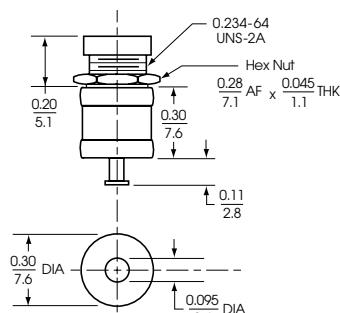


GAA6R012

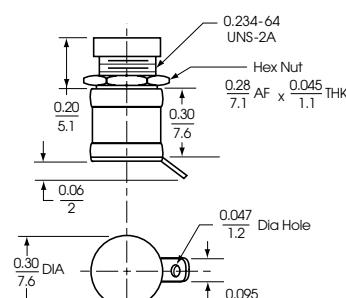
# 1.0 - 10.0 pF, 1.0 - 14.0 pF and 2.0 - 16.0 pF CAPACITANCE RANGES

- Torque: 0.5 to 5.0 oz-in (36 to 360 g-cm)
- Temperature Coefficient:  $\pm 15 \text{ ppm}/^\circ\text{C}$
- Self-Resonant Frequency: > 5 GHz at min capacitance

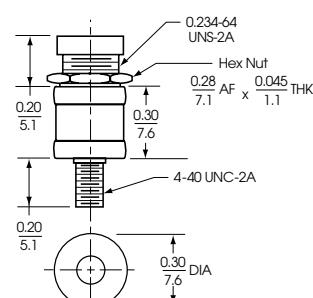
Dimensions are in/mm  
Adjust screw slot: 0.16/4.0 x 0.020/0.51



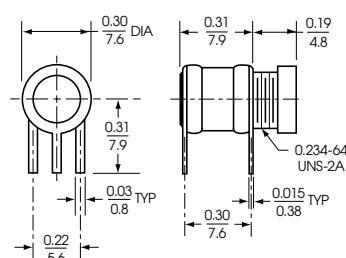
GAA10001, GAA14001 &amp; GAA16001



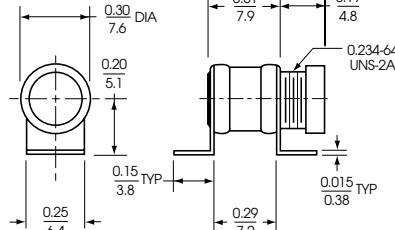
GAA10002, GAA14002 &amp; GAA16002



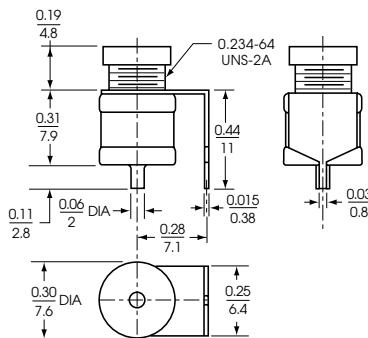
GAA10003, GAA14003 &amp; GAA16003



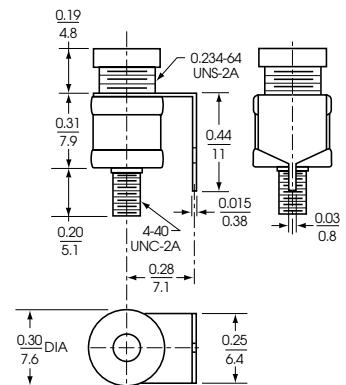
GAA10004, GAA14004 &amp; GAA16004



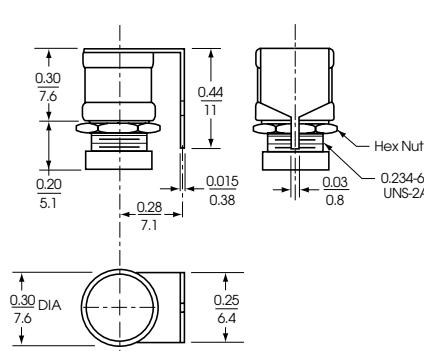
GAA10005, GAA14005 &amp; GAA16005



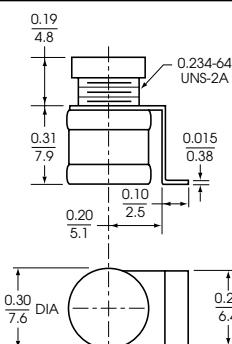
GAA10006, GAA14006 &amp; GAA16006



GAA10007, GAA14007 &amp; GAA16007



GAA10008, GAA14008 &amp; GAA16008



GAA10009, GAA14009 &amp; GAA16009

## RECOMMENDED HANDLING PROCEDURE

### Tuning

The rotor should not be torqued once maximum capacitance is reached.

### Soldering

Maximum recommended solder temperature: 275°C.

### Washing

Sealing Caps should be secured when washing board assemblies to prevent infusion of cleaning solvents

**Sprague-Goodman Electronics, Inc.**

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