

# 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:  $-65^{\circ}$  to  $+125^{\circ}\text{C}$

Working Voltage: 250 VDC

Test Voltage: 500 VDC

Insulation Resistance:  $>10^6$  Megohms

Contact Resistance:  $<0.01$  Ohms

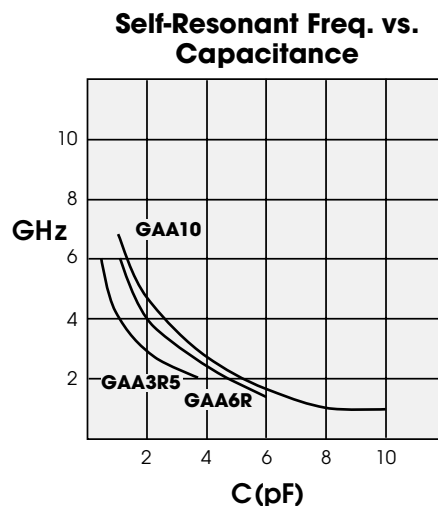
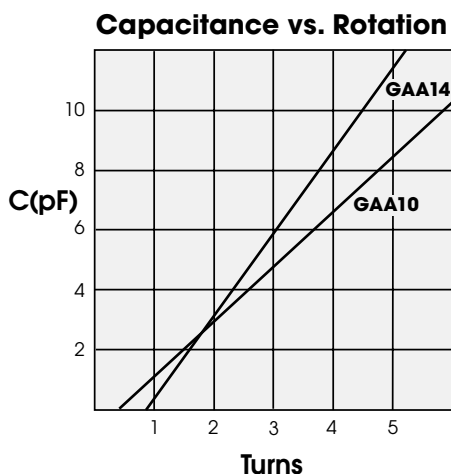
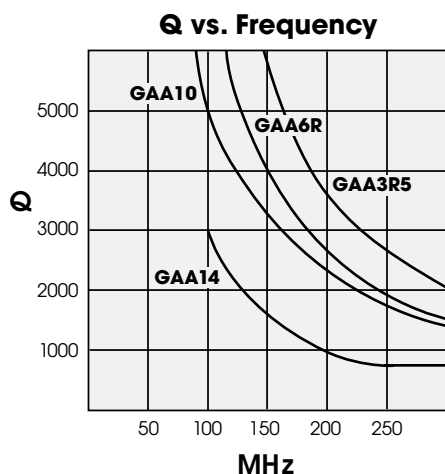


Q:  $>5000$  at 100 MHz

Vibration: 60 g, 10 to 2000Hz

Shock: 1500 g, 0.5 ms

Constructed with  $300^{\circ}\text{C}$  solder



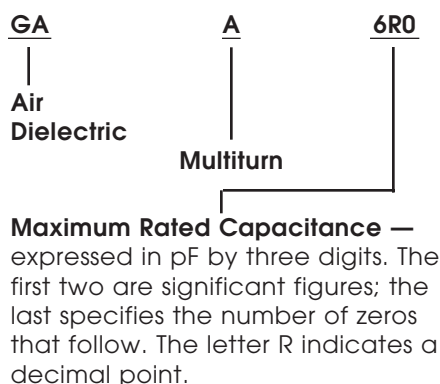
**Sprague-Goodman Electronics, Inc.**

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# PART NUMBERING SYSTEM



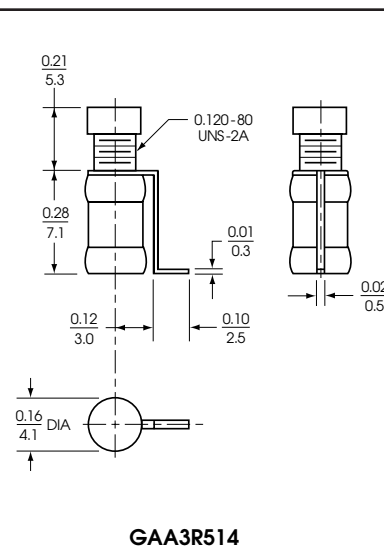
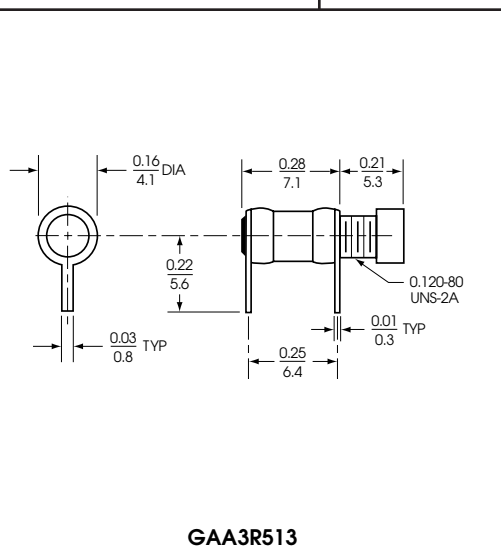
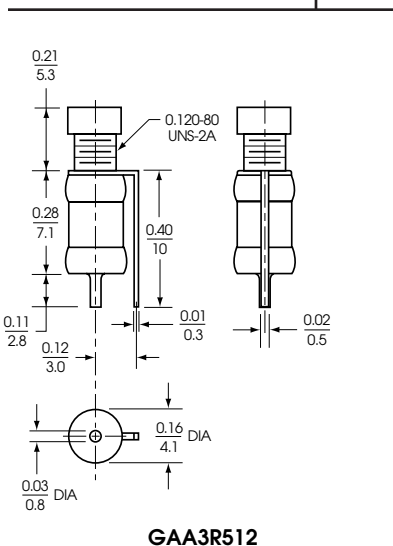
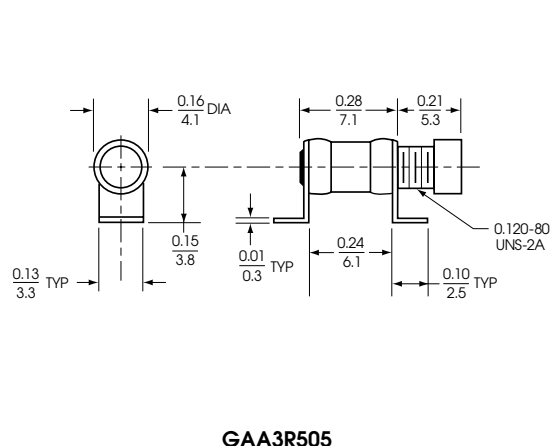
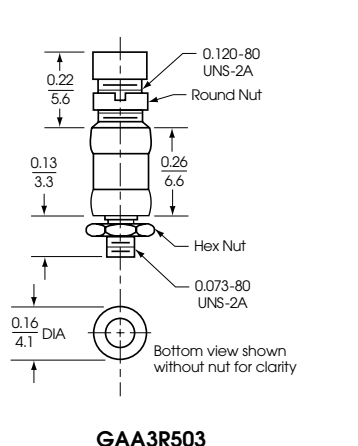
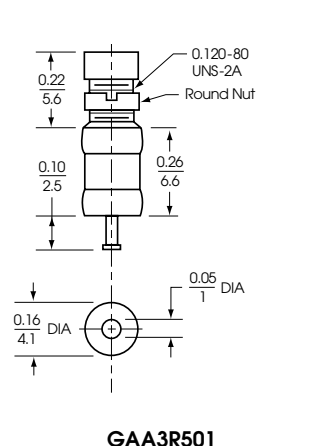
## Mounting Modifications

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

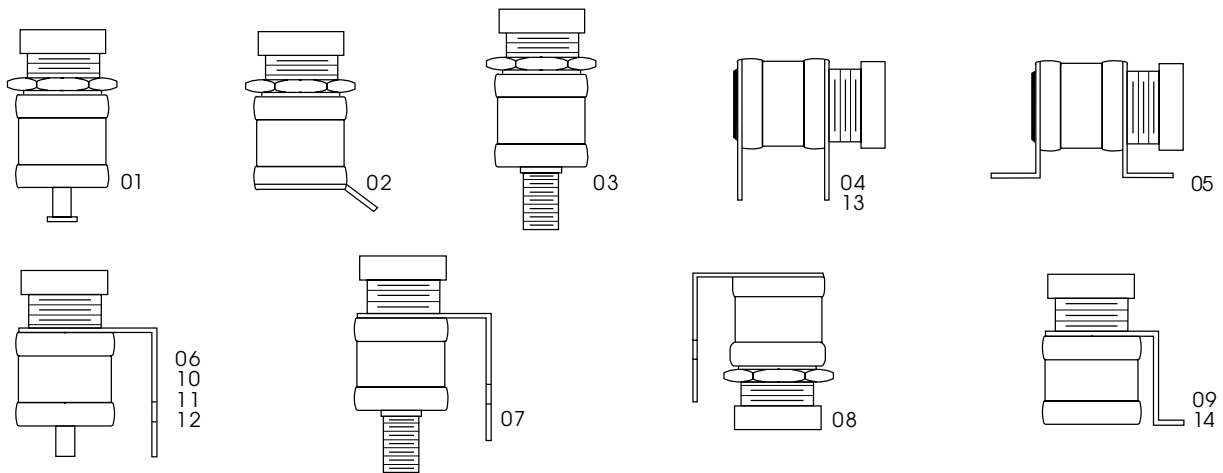
# 0.35–3.5 pF CAPACITANCE RANGE

- Torque: 0.3 to 3.0 oz-in (22 to 216 g-cm)
- Temperature Coefficient:  $\pm 30$  ppm/°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



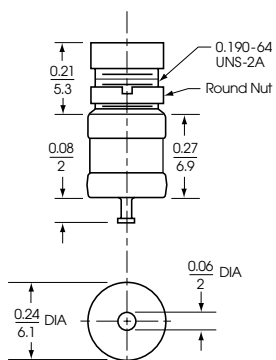
Not to scale.



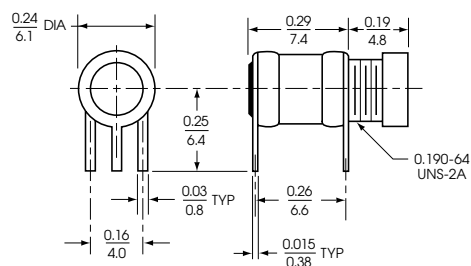
## 0.6-6.0 pF CAPACITANCE RANGE

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

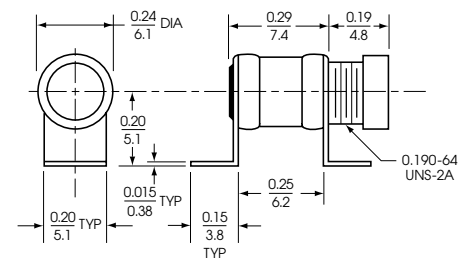
Dimensions are in/mm  
Adjust screw slot: 0.13/3.3 x 0.020/0.51



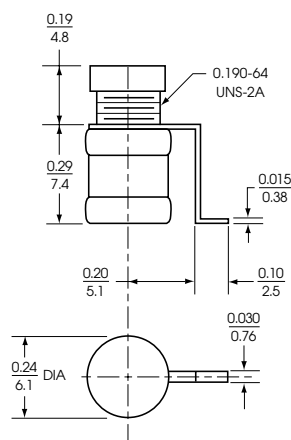
GAA6R001



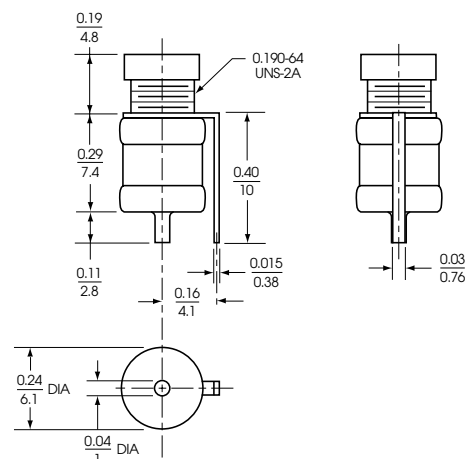
GAA6R004



GAA6R005



GAA6R014

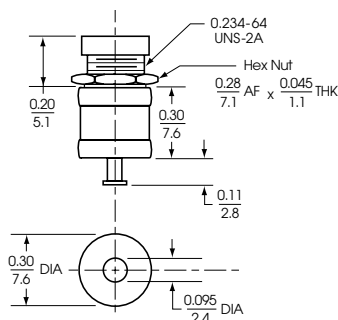


GAA6R012

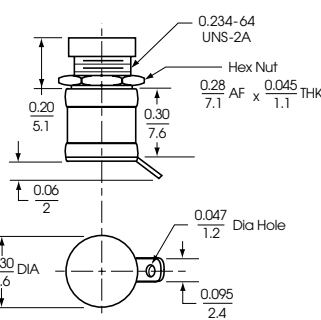
# 1.0 – 10.0 pF, 1.0 – 14.0 pF and 2.0 – 16.0 pF CAPACITANCE RANGES

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

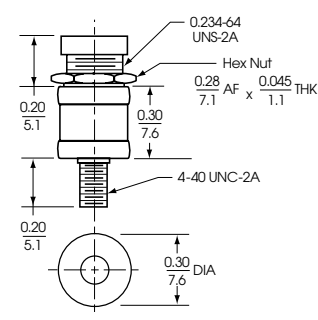
Dimensions are in/mm  
Adjust screw slot: 0.16/4.0 x 0.020/0.51



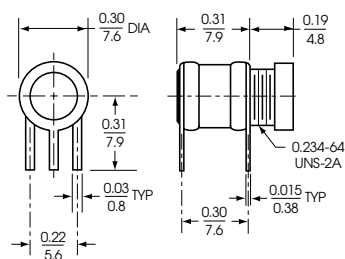
GAA10001, GAA14001 &amp; GAA16001



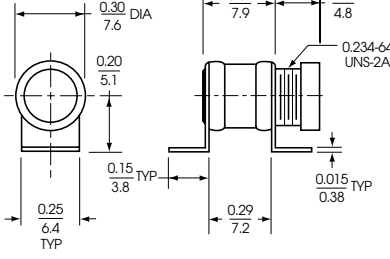
GAA10002, GAA14002 &amp; GAA16002



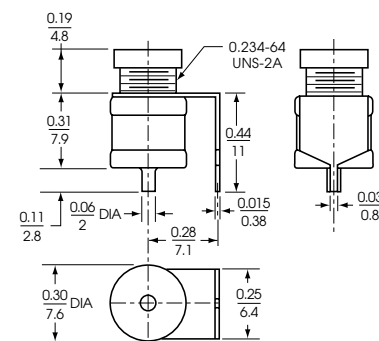
GAA10003, GAA14003 &amp; GAA16003



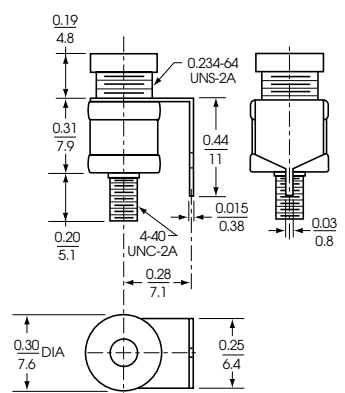
GAA10004, GAA14004 &amp; GAA16004



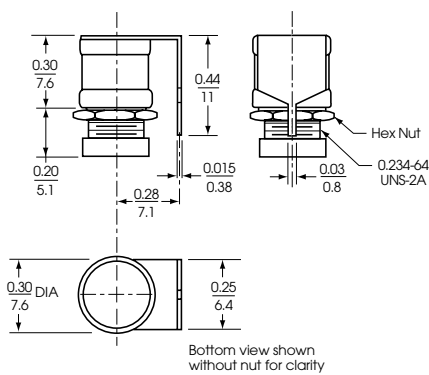
GAA10005, GAA14005 &amp; GAA16005



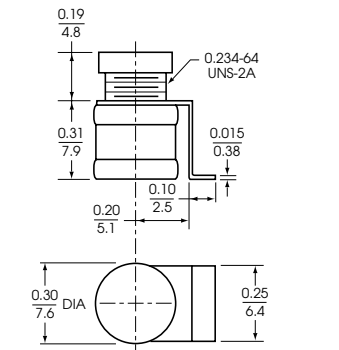
GAA10006, GAA14006 &amp; GAA16006



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

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