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

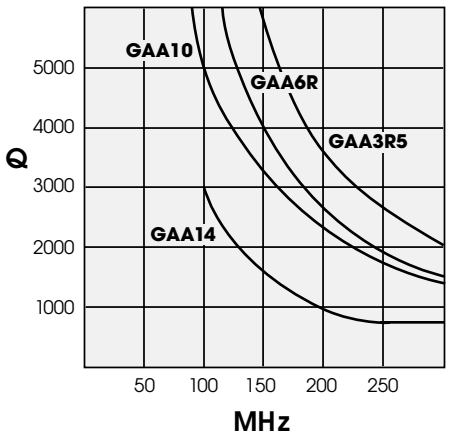
- High Q
- Fourteen standard mounting styles, including surface mount
- Excellent stability
- Designed to meet MIL-C-14409D
- Multiturn resolution

SPECIFICATIONS

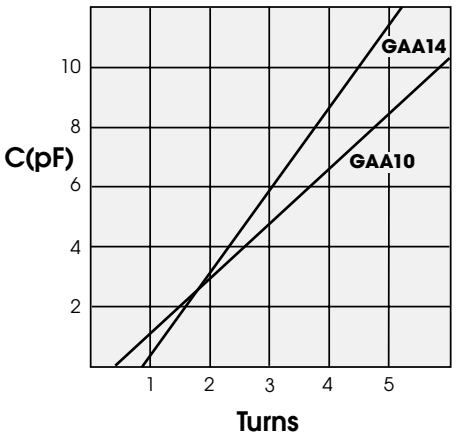
Operating Temperature Range: –65° to +125°C
Working Voltage: 250 VDC
Test Voltage: 500 VDC
Insulation Resistance: $>10^6$ Megohms
Contact Resistance: <0.01 Ohms

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

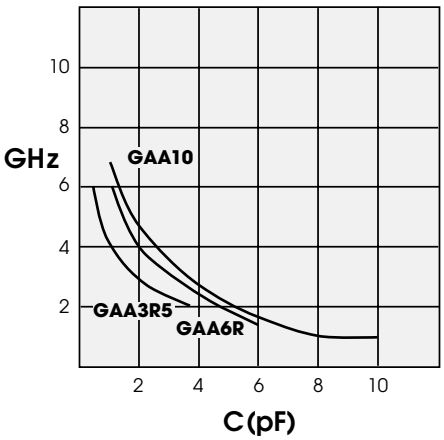
Q vs. Frequency



Capacitance vs. Rotation



Self-Resonant Freq. vs. Capacitance



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PART NUMBERING SYSTEM

GA — **Air Dielectric**

A — **Multiturn**

6R0 — **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

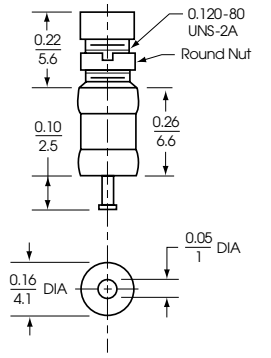
Mounting Modifications

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

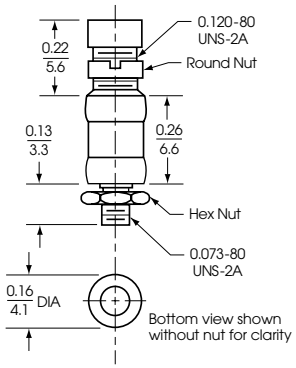
0.35–3.5 pF CAPACITANCE RANGE

- Torque: 0.3 to 3.0 oz-in (22 to 216 g-cm)
- Temperature Coefficient: ±30 ppm/°C
- Self-Resonant Frequency: >6 GHz at min capacitance

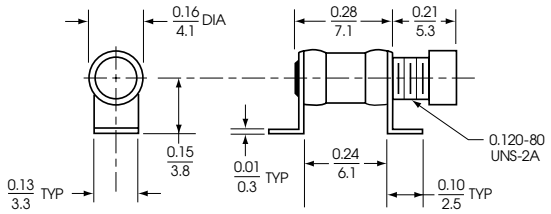
Dimensions are in/mm
Adjust screw slot: 0.060/1.5 x 0.016/0.41



GAA3R501



GAA3R503



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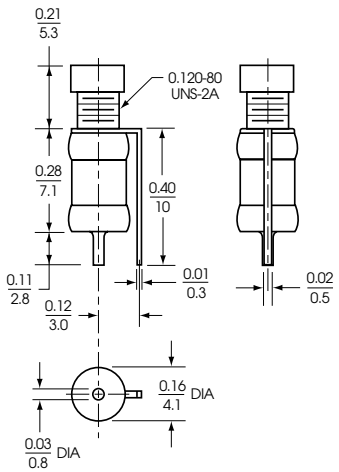

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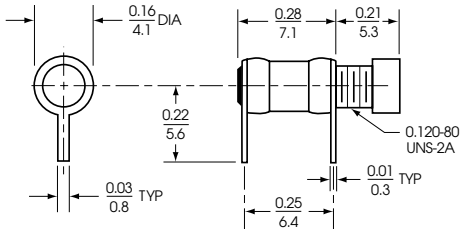
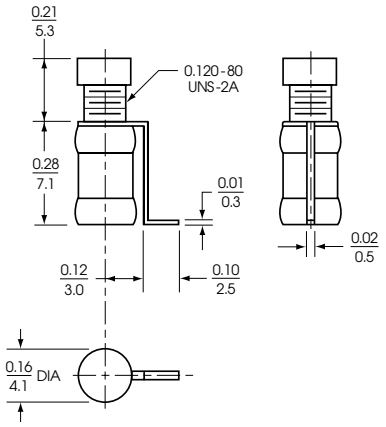
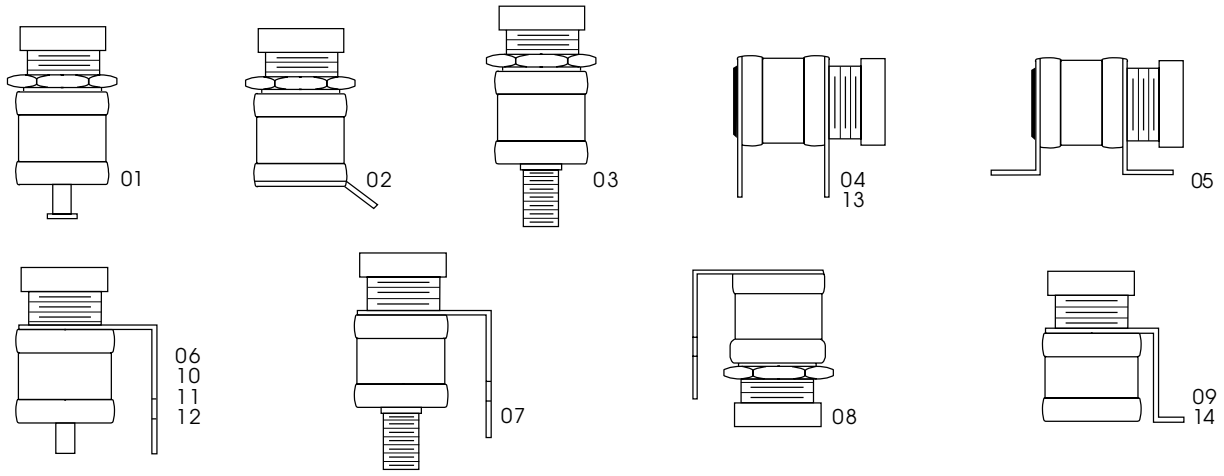


GAA3R513



GAA3R514

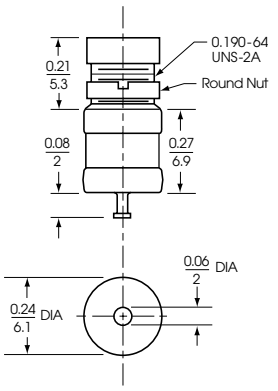
Not to scale.



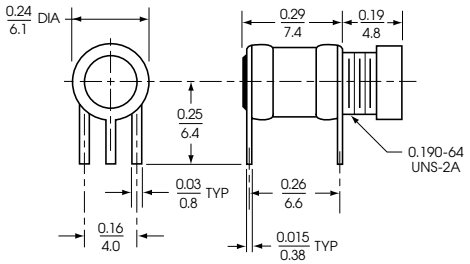
0.6–6.0 pF CAPACITANCE RANGE

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

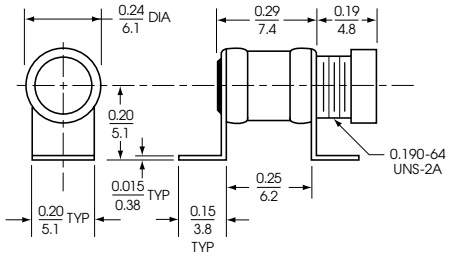
Dimensions are in/mm
Adjust screw slot: 0.13/3.3 x 0.020/0.51



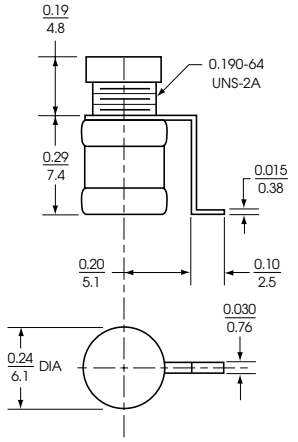
GAA6R001



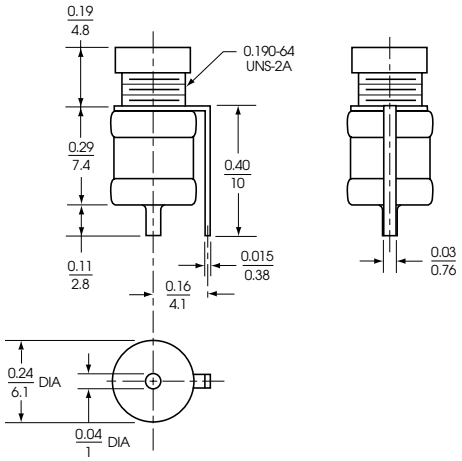
GAA6R004



GAA6R005



GAA6R014

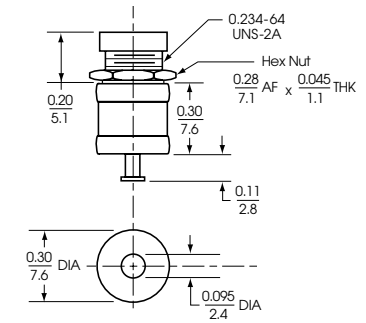


GAA6R012

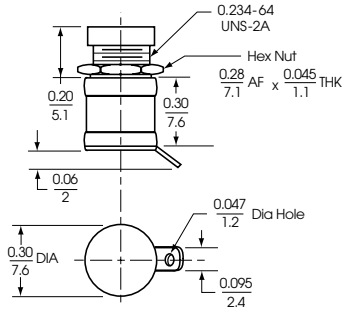
1.0–10.0 pF, 1.0–14.0 pF and 2.0–16.0 pF CAPACITANCE RANGES

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

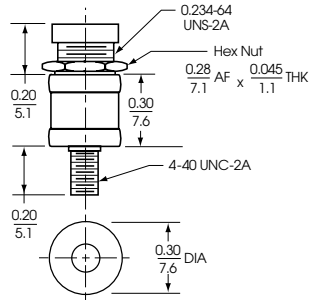
Dimensions are in/mm
Adjust screw slot: 0.16/4.0 x 0.020/0.51



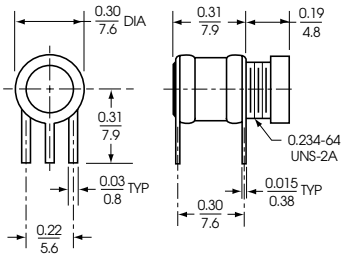
GAA10001, GAA14001 & GAA16001



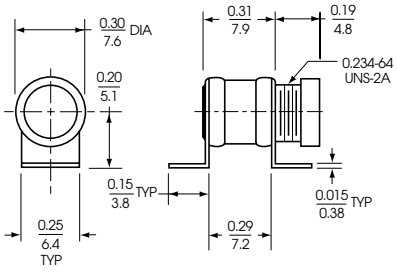
GAA10002, GAA14002 & GAA16002



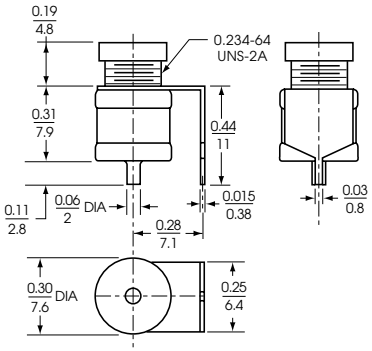
GAA10003, GAA14003 & GAA16003



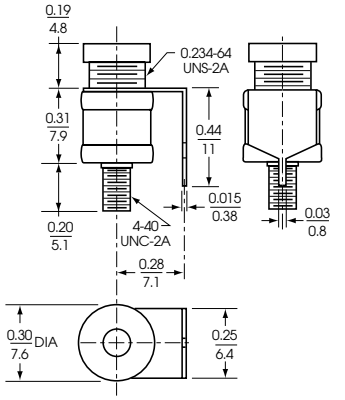
GAA10004, GAA14004 & GAA16004



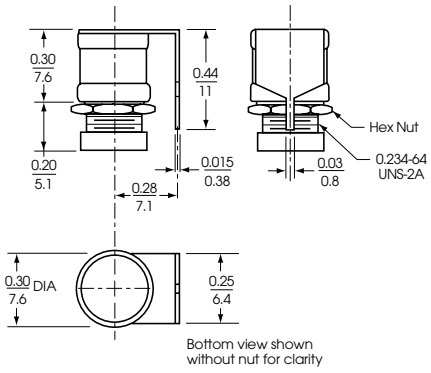
GAA10005, GAA14005 & GAA16005



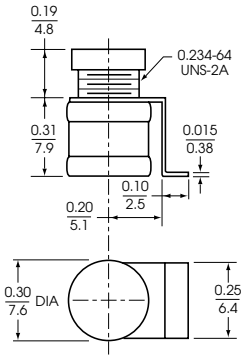
GAA10006, GAA14006 & GAA16006



GAA10007, GAA14007 & GAA16007



GAA10008, GAA14008 & GAA16008



GAA10009, GAA14009 & 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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