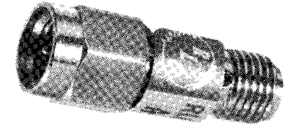


# Broadband Miniature Attenuators



RLC Electronics' Broadband Miniature Attenuators offer precision impedance matching and bi-directional handling over the extremely broad frequency of DC to 18 GHz. They are also available in the reduced frequency ranges of DC to 12.4 GHz, DC to 8 GHz and DC to 1.5GHz. These miniature microwave structures

are uniquely constructed resistive film elements combined with precision connectors meeting the full requirements of MIL-C-39012. Units can be supplied in standard attenuation values as listed or other values for specific requirements. Three combinations of connectors are available in the standard models.

## Specifications

A-1-2-3-4

| Model Number | Frequency Range (GHz) | Attenuation Value (dB) | Accuracy ( $\pm$ dB) | VSWR (Max) |
|--------------|-----------------------|------------------------|----------------------|------------|
| A-1          | DC-1.5                | 1 Thru 6               | .3                   | 1.20       |
| A-1          |                       | 7 Thru 20              | .5                   | 1.20       |
| A-1          |                       | 21 Thru 30             | .8                   | 1.20       |
| A-8          | DC-8                  | 1 Thru 6               | .3                   | 1.25       |
| A-8          |                       | 7 Thru 20              | .5                   | 1.25       |
| A-8          |                       | 21 Thru 30             | .8                   | 1.25       |
| A-12         | DC-12.4               | 1 Thru 6               | .3                   | 1.35       |
| A-12         |                       | 7 Thru 20              | .5                   | 1.35       |
| A-12         |                       | 21 Thru 30             | .8                   | 1.35       |
| A-18         | DC-18                 | 1 Thru 6               | .3                   | 1.35       |
| A-18         |                       | 7 Thru 20              | .5                   | 1.35       |
| A-18         |                       | 21 Thru 30             | 1.0                  | 1.35       |

**Power Rating:** 2 watts avg @ 25° C  
Derated linearly to 0.5 watts @ 125° C

**Impedance:** 50 Ohms

**Connectors:** SMA male or female, N male or female

**Weight:** 0.4 oz for SMA, 2 oz for Type N

**Material:** Stainless Steel

**Environment:** MIL-A-3933

### To designate attenuator desired use:

- (1) 1, 8, 12, 18 for 1.5, 8.0, 12.4 and 18.0 GHz  
(2) 3, 6, etc for attenuation value

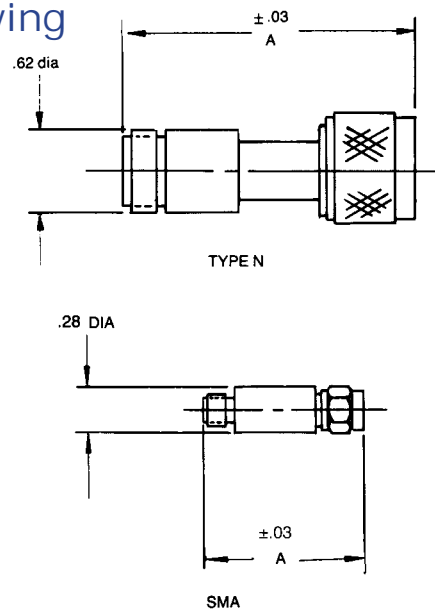
- (3) "R" for SMA, "N" for Type N: Male and Female is standard  
(4) F for 2 female connectors M for 2 male connectors

Example: A-18-20-R is a DC-18 GHz, 20 dB attenuator with SMA male and female connectors

## Outline Drawing

| Model No.       | A dimension |      |      |      |      |      |
|-----------------|-------------|------|------|------|------|------|
|                 | R           | RM   | RF   | N    | NM   | NF   |
| A-1-thru A-12-  | .86         | .98  | .92  | 1.77 | 1.70 | 1.86 |
| A-13-thru A-30- | .98         | 1.12 | 1.05 | 1.77 | 1.70 | 1.86 |

Tolerances unless otherwise specified are: .xx  $\pm$  .02; .xxx,  $\pm$  .005.



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