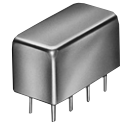


BI-PHASE 1 MHz to 2 GHz



TFAS



PAS
GAS

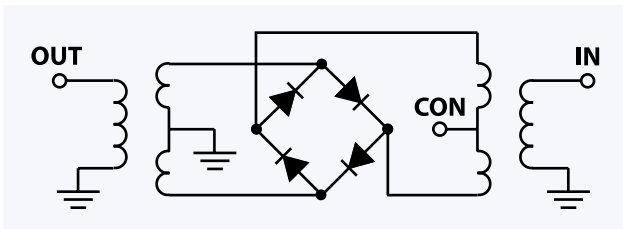
| MODEL NO. | FREQUENCY MHz | | INSERTION LOSS dB (±20 mA) | | | | MAX. INPUT PWR dBm (±20 mA) | | IN-OUT ISOLATION, dB (0 mA) | | | | | | BI-PHASE \bar{X} (±20 mA) Typ. | | | | CASE STYLE | C O N N E C T I O N | PRICE \$ ea. Qty. (1-9) |
|------------|------------------|---------|----------------------------|-----|-------------|-----|-----------------------------|-----------|-----------------------------|--------|--------|-------------------------------|----|--|----------------------------------|--------|-----|-----|------------|---------------------|-------------------------|
| | IN f_L - f_U | CON | Mid-Band m | | Total Range | | 1 dB compr. | no damage | L Typ. | M Typ. | U Typ. | Δ AMP (dB) Total Range | | Phase(deg) deviation from 180° Total Range | | Note B | | | | | |
| PAS-1* | 5-450 | DC-0.05 | 3.5 | 4.0 | 3.5 | 4.7 | 20 | 29 | 65 | 50 | 45 | 35 | 35 | 25 | 0.1 | 0.1 | 0.5 | 1.2 | A01 | cf | 36.20 |
| PAS-2* | 10-1000 | DC-0.05 | 4.0 | 6.0 | 6.5 | 8.5 | 20 | 29 | 50 | 40 | 40 | 30 | 35 | 25 | 0.1 | 0.3 | 0.5 | 1.0 | A01 | cg | 50.20 |
| PAS-3* | 1-200 | DC-0.05 | 1.4 | 2.0 | 1.6 | 2.5 | 15 | 29 | 65 | 50 | 50 | 40 | 50 | 35 | 0.1 | 0.1 | 0.5 | 1.0 | A01 | cf | 37.20 |
| PAS-2000** | 100-2000 | DC-0.5 | 4.2 | 6.5 | 5.4 | 7.5 | 19* | 25 | 30 | 22 | — | — | 26 | 20 | 0.3 | 0.4 | 5.0 | 8.0 | A05 | ch | 27.20 |
| □ TFAS-1* | 2-400 | DC-0.05 | 1.4 | 2.0 | 1.6 | 3.0 | 20♣ | 25 | 65 | 45 | 45 | 33 | 35 | 25 | 0.1 | 0.1 | 1.0 | 2.0 | B02 | cm | 16.20 |
| □ TFAS-2** | 10-1000 | DC-0.5 | 3.7 | 4.5 | 5.0 | 8.0 | 17* | 25 | 50 | 30 | 42 | 20 | 31 | 20 | 0.1 | 0.2 | 2.0 | 3.0 | B02 | cm | 20.20 |
| □ GAS-1** | 5-450 | DC-0.05 | 3.3 | 4 | 3.5 | 5.0 | 20 | 25 | 60 | 48 | 45 | 35 | 35 | 25 | 0.10 | 0.1 | 1.0 | 1.5 | A05 | cf | 16.20 |
| □ GAS-2** | 10-1000 | DC-0.05 | 4.3 | 6 | 5.2 | 8.5 | 20 | 25 | 55 | 40 | 35 | 25 | 28 | 20 | 0.10 | 0.3 | 1.5 | 3.0 | A05 | cg | 18.20 |

L = low range [f_L to 10 f_L]

M = mid range [$10f_L$ to $f_U/2$]

U = upper range [$f_U/2$ to f_U]

m = mid band [$2f_L$ to $f_U/2$]



NOTES:

- * Recommended for electronic attenuator
- ** Recommended for bi-phase modulator
- Denotes 75 Ohm model.
- Non-hermetic
- ✱ +15 dBm from 100-800 MHz
- ♣ +15 dBm from 2-10 MHz
- ★ +13 dBm from 10-500 MHz
- A. General Quality Control Procedures, Environmental Specifications, Hi-Rel and MIL description are given in General Information (Section 0).
- B. Connector types and case mounted options, case finishes are given in section 0, see "Case styles & Outline Drawings".
- C. Prices and specifications subject to change without notice.
- 1. Absolute maximum power, voltage and current ratings:
 - 1a. Control current, 30mA
 - 1b. Max. Power at room temperature
- 2. Performance specifications apply for input power up to 10 dB below stated 1dB compression; example: +5dBm in 2-10MHz range for TFAS-1, TFAS-1SM



TFAS-SM



SYAS



RAS



LRAS

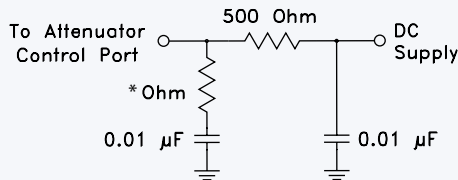
| MODEL NO. | FREQUENCY MHz | | INSERTION LOSS dB (±20 mA) | | | | MAX. INPUT PWR dBm (±20 mA) | | IN-OUT ISOLATION, dB (0 mA) | | | | | | BI-PHASE \bar{X} (±20 mA) Typ. | | | | CASE STYLE | CONNECTION | PRICE \$ ea. Qty. (1-9) |
|---------------|------------------|---------|----------------------------|-----|-------------|-----|-----------------------------|-----------|-----------------------------|--------|----|-------------------|--------------------------------|-------------|----------------------------------|--------|-----|-----|------------|------------|-------------------------|
| | IN f_L - f_U | CON | Mid-Band m | | Total Range | | 1 dB compr. | no damage | L | M | U | Δ AMP (dB) | Phase(deg) deviation from 180° | Total Range | Total Range | Note B | | | | | |
| TFAS-1SM* | 2-400 | DC-0.05 | 1.4 | 2.0 | 1.6 | 3.0 | 20* | 25 | 65 | 45 | 45 | 33 | 35 | 25 | 0.1 | 0.1 | 1.0 | 2.0 | NNN150 | cm | 16.20 |
| TFAS-2SM** | 10-1000 | DC-0.5 | 3.7 | 4.5 | 5.0 | 8.0 | 17* | 25 | 50 | 30 | 42 | 20 | 31 | 20 | 0.1 | 0.2 | 2.0 | 3.0 | NNN150 | cm | 20.20 |
| SYAS-1* | 2-400 | DC-0.05 | 1.4 | 2.0 | 1.6 | 3.0 | 20* | 25 | 65 | 45 | 45 | 33 | 35 | 25 | 0.1 | 0.1 | 1.0 | 2.0 | TTT167 | ck | 9.95 |
| SYAS-2** | 10-1000 | DC-0.05 | 4.0 | 6.0 | 4.5 | 7.0 | 17* | 25 | 59 | 40 | 42 | 28 | 28 | 20 | 0.1 | 0.3 | 2.0 | 3.0 | TTT167 | ck | 13.95 |
| SYAS-860** | 600-1000 | DC-0.5 | — | — | 2.7 | 5.7 | 14 | 25 | 25 | (typ.) | 18 | (min.) | — | — | — | 0.5 | — | 4.0 | TTT166 | ck | 15.95 |
| RAS-1** | 2-400 | DC-0.05 | 1.4 | 2.4 | 1.6 | 3.2 | 20* | 25 | 65 | 45 | 45 | 28 | 32 | 22 | 0.10 | 0.1 | 1.0 | 2.0 | TT241 | ge | 7.95 |
| ■ RAS-2-75** | 10-1000 | DC-0.05 | 4.1 | 6.0 | 4.5 | 7.5 | 20 | 25 | 58 | 40 | 42 | 28 | 39 | 20 | 0.15 | 0.3 | 1.5 | 3.0 | TT240 | cj | 9.95 |
| ■ LRAS-2-75** | 10-1000 | DC-0.05 | 4.1 | 6.0 | 4.5 | 7.5 | 20 | 25 | 58 | 40 | 42 | 28 | 39 | 20 | 0.15 | 0.3 | 1.5 | 3.0 | QQQ130 | cj | 9.95 |

L = low range [f_L to $10f_L$]

M = mid range [$10f_L$ to $f_U/2$]
m = mid band [$2f_L$ to $f_U/2$]

U = upper range [$f_U/2$ to f_U]

suggested control port biasing configuration



*50 ohm for 50 ohm models
75 ohm for 75 ohm models

pin and coaxial connections

see case style outline drawings for pin locations

| PORT | cf | cg | ch | cj | ck | cm | ge |
|----------|---------|---------|---------|-------|-------|----|-------|
| INPUT | 1 | 1 | 1 | 4 | 1 | 1 | 4 |
| OUTPUT | 8 | 8 | 8 | 1 | 2 | 4 | 1 |
| CONTROL | 3,4 ^ | 3,4 ^ | 3 | 5 | 3 | 2 | 5 |
| GND EXT. | 2,5,6,7 | 2,5,6,7 | 2,5,6,7 | 2,3,6 | 4,5,6 | 3 | 2,3,6 |
| CASE GND | 2 | 2,5,6,7 | 2,5,6,7 | — | — | 3 | — |
| NOT USED | — | — | 4 | — | — | — | — |

^ Pins must be connected together externally.

NSN GUIDE

| MCL NO. | NSN |
|---------|------------------|
| PAS-1 | 5985-01-282-2105 |
| PAS-2 | 5985-01-192-0100 |
| PAS-3 | 5895-01-067-3035 |



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