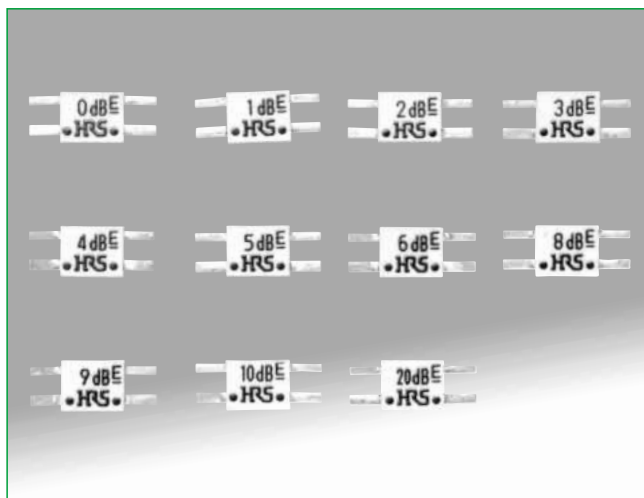


Stripline Mounting Fixed Attenuators

AT-2300 Series



■ Features

1. Wide Range of Variations for Each Type of Attenuator

Attenuation levels available in 1 dB steps from 0 to 6 dB and from 8 to 10 dB, and 20 dB for a total of 11 types of variations.

■ Product Specifications

| | | | | |
|---------|--------------------------|---------------------|-----------------------|----------------|
| Ratings | Frequency range | DC to 2.5GHz (Note) | Operating temperature | -10°C to +65°C |
| | Characteristic impedance | 50 Ω | Operating humidity | 95% max. |
| | Maximum input power | 1W | | |

Note: DC to 600MHz for AT-2320.

| Item | Requirement | Conditions |
|---------------------|---|---|
| 1.Vibration | No electrical discontinuity of 1 μ or more. No damage, cracks, or parts dislocation. | Frequency of 10 to 2000 Hz, overall amplitude of 1.5mm, acceleration of 98m/s ² , 2 hours in each of the 3 directions. |
| 2.Shock | | Acceleration of 490m/s ² , sine half-wave waveform, 3 cycles in each of the 3 axis. |
| 3.Temperature cycle | | Temperature : -55°C → +15°C → +35°C → +85°C → +15°C → +35°C Time : 30 → 2 to 3 → 30 → 2 to 3 (Minutes) 5 cycles |

The test method conforms to MIL-STD-202.

■ Materials / Finishes

| Component | Material | Finish |
|---------------------|------------|------------------|
| Attenuation element | Metal film | — |
| Tab | Copper | Tin-lead plating |

■ Ordering information

AT-23 01 (40)

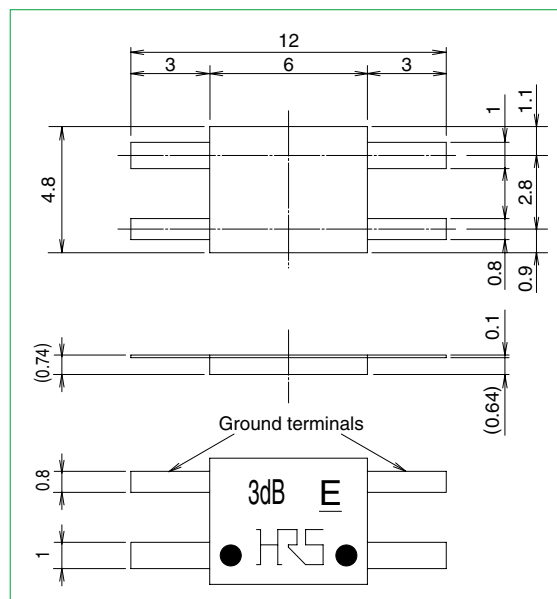
- ① ② ③ ④

*Each attenuator is supplied in individual package

| |
|--|
| ① AX:Fixed attenuator |
| ② Series name :2300 Series |
| ③ Attenuation 00-(0) : 0 dB (Through) 01 : 1dB 06 : 6dB |
| ④ (40): RoHS Compliant |

■ Dimensions

AT-2303 shown

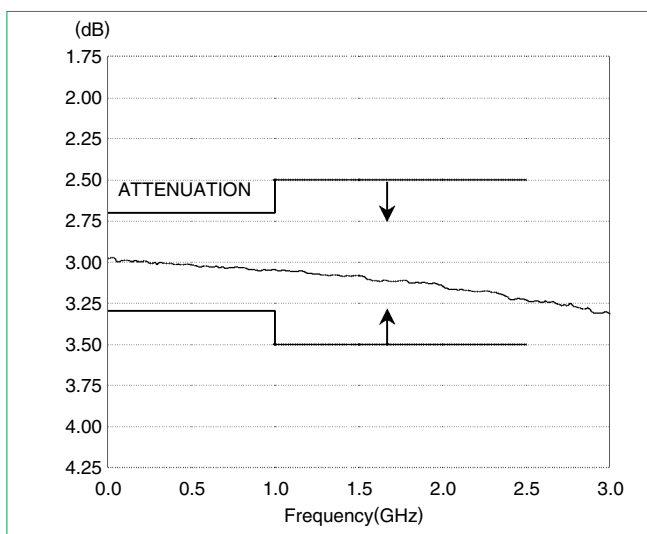


Specifications

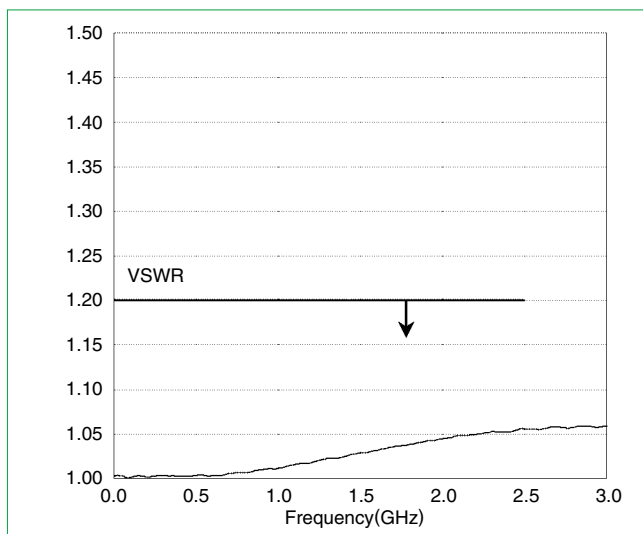
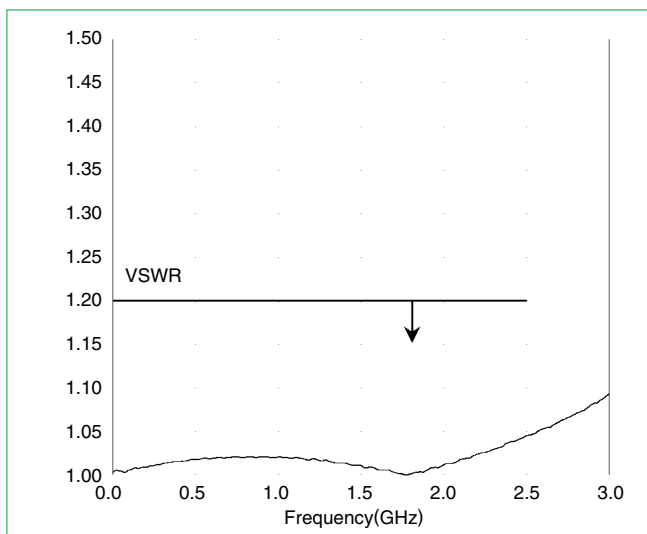
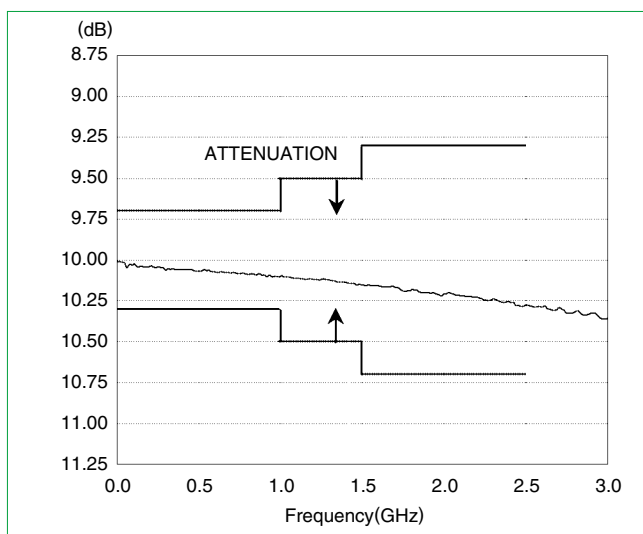
| Part number | Attenuation (dB) | | | V.S.W.R(Max) DC~2,500MHz | Characteristic Impedance (Ω) | Power (W) | Mounting surface temperature (°C Max.) at time of maximum input power | Weight (g) |
|-----------------|-------------------|-------------------|----------------|-----------------------------|------------------------------|-----------|---|------------|
| | DC~1,000MHz | 1,000~1,500MHz | 1,500~2,500MHz | | | | | |
| AT-2300-(0)(40) | 0 ^{+0.3} | 0 ^{+0.5} | | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2301(40) | 1±0.3 | 1±0.5 | | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2302(40) | 2±0.3 | 2±0.5 | | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2303(40) | 3±0.3 | 3±0.5 | | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2304(40) | 4±0.3 | 4±0.5 | | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2305(40) | 5±0.3 | 5±0.5 | | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2306(40) | 6±0.3 | 6±0.5 | | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2308(40) | 8±0.3 | 8±0.5 | | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2309(40) | 9±0.3 | 9±0.5 | | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2310(40) | 10±0.3 | 10±0.5 | 10±0.7 | 1.2 | 50 | 1 | +85 | 0.2 |
| AT-2320(40) | 20±1.5(DC~600MHz) | | | 1.2(DC~600MHz) | 50 | 1 | +85 | 0.2 |

Typical data

AT-2303(40)

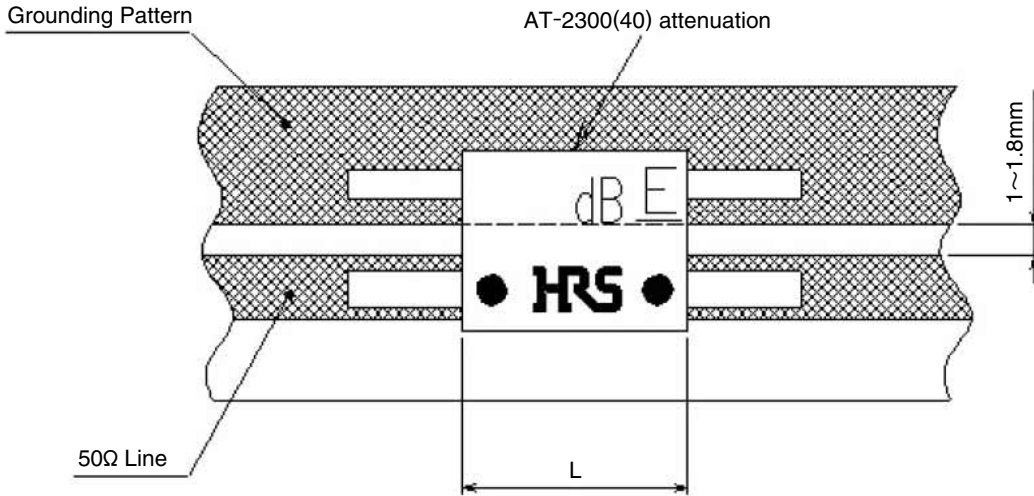


AT-2310(40)

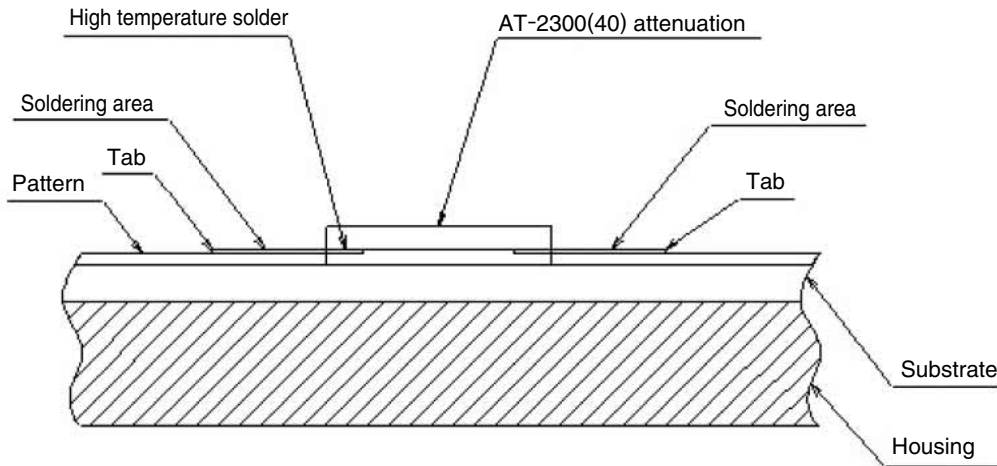


AT-2300 Series Series ● Stripline Mounting Fixed Attenuators

■ Recommended Mounting Pattern



* The dotted line portion indicates the position of the pattern.



- * Set interval L of the signal pattern to 6 mm and interval S of the signal pattern and ground pattern to 1 to 1.8 mm.
- * Press the red seal onto the microstrip line surface and solder the tab.
- * Tab Soldering Conditions
 - Soldering iron tip temperature: 260 to 290°C
 - Time: Within 5 seconds
- * Note that although the high frequency characteristics will be somewhat degraded, please attach the tab with some slack in order to improve the thermal reliability.

Mouser Electronics

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[AT-2300-\(0\)\(40\)](#) [AT-2301\(40\)](#) [AT-2304\(40\)](#) [AT-2305\(40\)](#) [AT-2320\(40\)](#) [AT-2310\(40\)](#) [AT-2300-\(0.5\)\(40\)](#) [AT-2308\(40\)](#) [AT-2309\(40\)](#) [AT-2303\(40\)](#) [AT-2302\(40\)](#) [AT-2306\(40\)](#)