表面実装チップ減衰器（集中定数形）

RF CHIP ATTENUATOR, T-Circuit

# RFA001 010
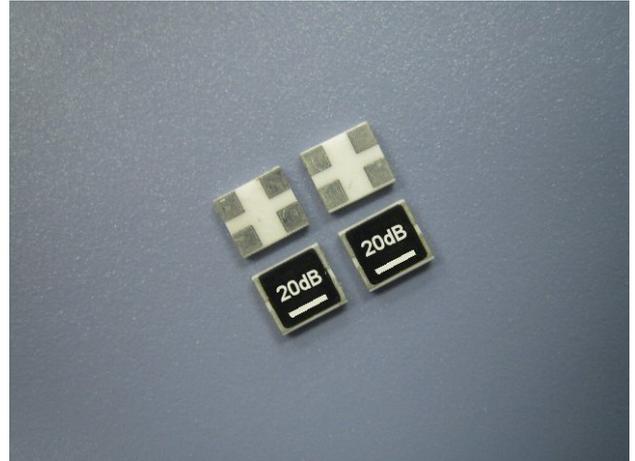
## 特長用途

RFA001010は，DC-2.5GHzの帯域で使用する定格電力1Wのチップアッテネータ.

RFA001010は、RoHS適合、アルミナ基板と高信頼性抵抗体と接合信頼度の高い表面実装端子から構成され、外形は 4mm角と小型.

RFA001010の減衰量は、0dB から40dB まで.

環境温度に対する変化が少なく，長期間にわたって安定動作するアッテネータ.

半導体製造設備，半導体試験装置，移動体通信の固定設備，マイクロ波送信機，高周波電源装置，工業計測機器，医用電子機器など.

## Features and Applications

2.5GHz-1W surface mount small 4mmx4mm size, attenuators of 50ohm characteristic impedance.

RFA001 has 2.5GHz-1W power rating and high durability against pulse / EMI accidents in small signal applications.

Long life and temperature stability of thin film technology realize better performance at a temperature range from –55C to +155C.

Applications include impedance matching, gain control circuits, isolation circuits of power boost amplifiers at GHz, loss compensation of transmission line of data communication systems, detecting signal control of ATE-LSI test system-circuit board functional test systems, industrial measurement electronics, medical scientific electronics and miscellaneous communication systems.
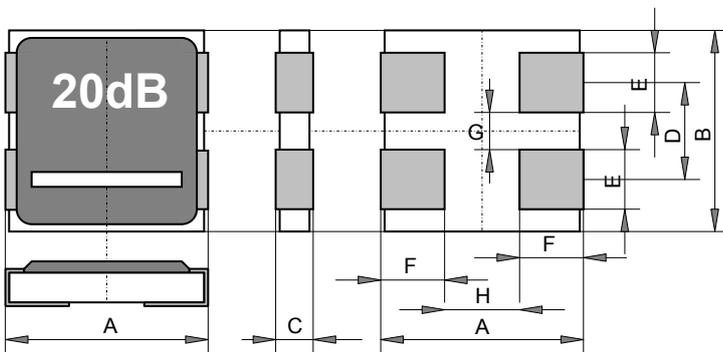
| Symbol | mm | inch |
|--------|-----|------|
| A | 4.0 /-0.2 | 0.157+/-0.008 |
| B | 4.0+/-0.2 | 0.157+/-0.008 |
| C | (0.65) | (0.026) |
| D | 2.0+/-0.1 | 0.079+/-0.004 |
| E | (1.2) | (0.047) |
| F | 1.2+/-0.1 | 0.047+/-0.004 |
| G | 0.8+/-0.1 | 0.032+/-0.004 |
| H | 1.6+/-0.1 | 0.063+/-0.004 |

## Specifications and Performances

| | |
|---|---|
| Attenuation | 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 40* dB |
| Tolerance of Attenuation (at DC) | 1-9dB:±0.3dB, 10dB:±0.5dB, 20dB:±1dB |
| Frequency Range | 0-10dB: DC- 2,5GHz, 20dB: DC-600MHz |
| Volt Standing Wave Ratio | <1.2(0-10dB, DC-2.5GHz)，（20dB, 0.6GHz） |
| Rating Power | 1W |
| Characteristic Impedance | 50 ohm |
| Tolerance of Impedance (at DC) | ±2 ohm |

## Structure and Material

Resistance, Thick Film
Conductor, Cu
Coating, Epoxy
Conductor, Cu
Substrate, Alumina
Terminal: Tin plated Cu with Ni barrier.
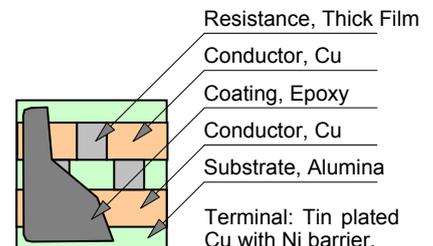
\* 40dB attenuation is optional, please contact to info@nikkohm.co.jp

## Ordering Information

| Type | Attenuation | Rating Power | |
|------|-------------|--------------|---|
| RFA001010 | 6dB | Z00 | |
| RFA001010 | 0, 1, 2, 3, 4dB | Z00 | Bulk |
| | 5, 6, 7, 8, 9 dB | Z01 | Tape reel |
| | 10, 20, 40 dB | | |

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## Typical S11-S21
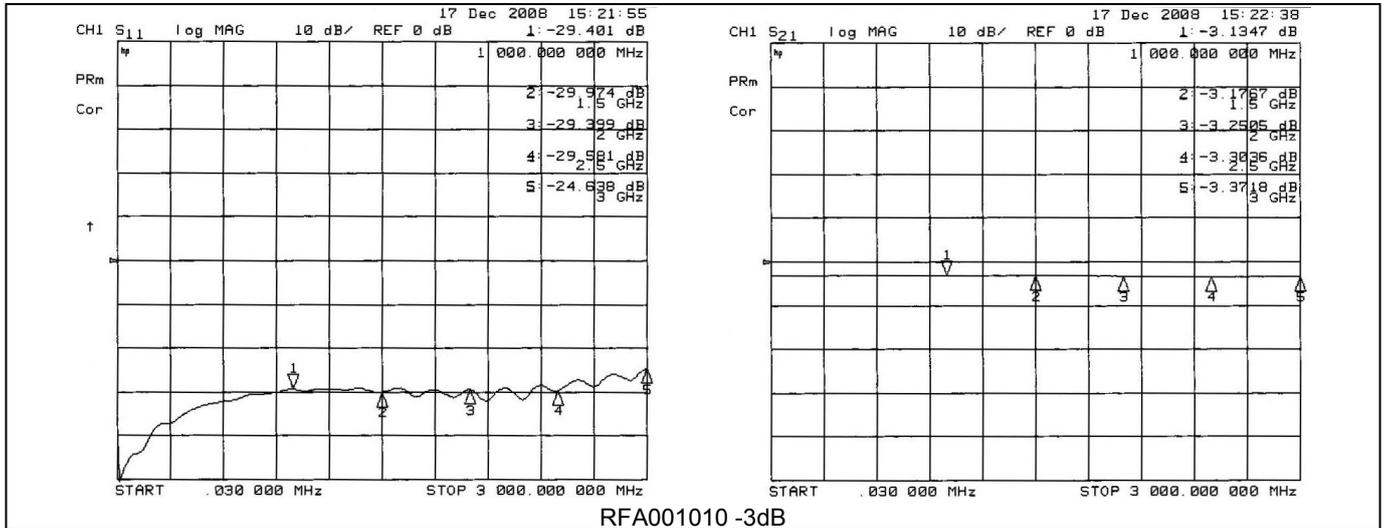


RFA001010 -3dB
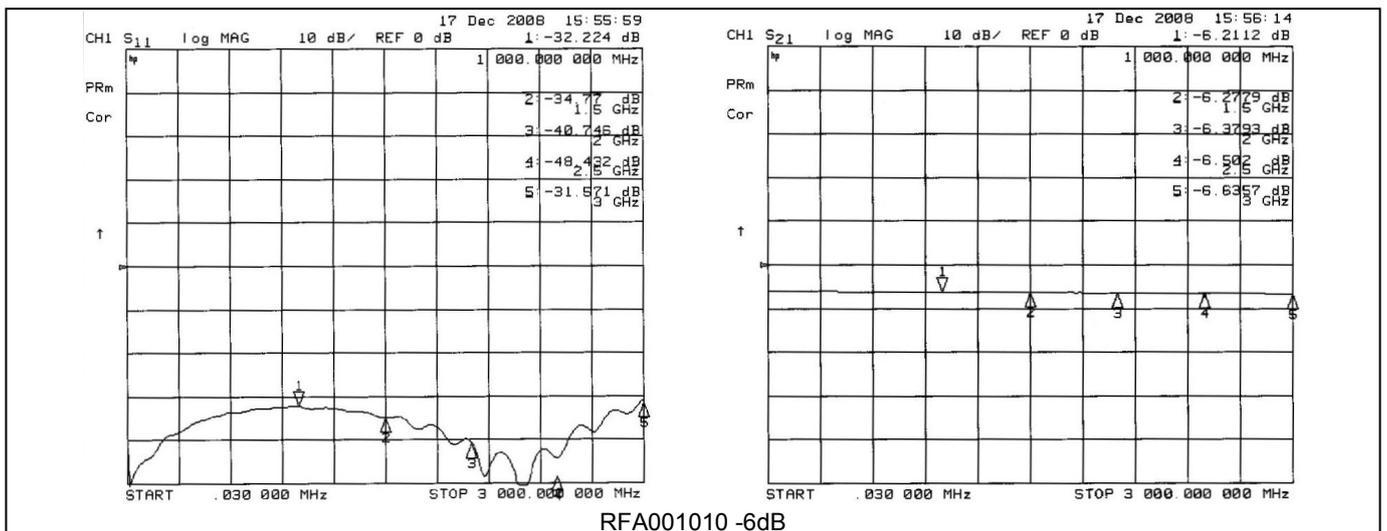


RFA001010 -6dB
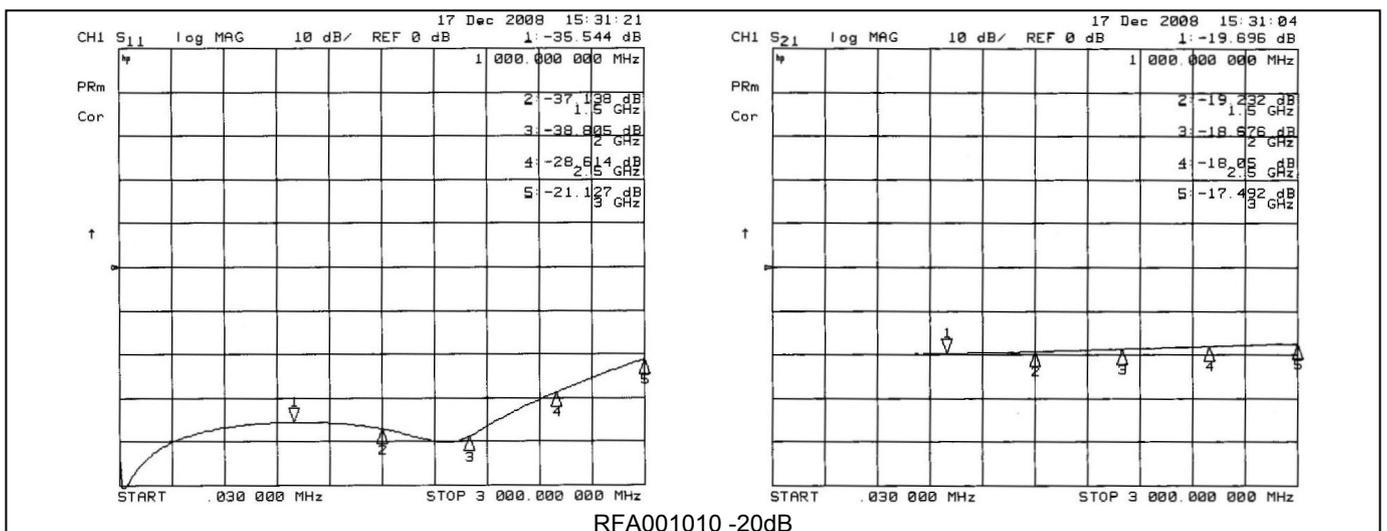


RFA001010 -20dB

換算式、Transformation:

$$VSWR = \frac{1+|\Gamma|}{1-|\Gamma|} \dots\dots |\Gamma| = 10^{\frac{S11}{20}} \qquad |\Gamma| = \frac{VSWR-1}{VSWR+1} \dots\dots S11 = -(-20\log|\Gamma|)$$