

High Precision Chip Attenuators (Up to 30GHz)

ATF Series

Features

- Attenuation to high frequency range (up to 30GHz)
- Compatible with PAT series land patterns
- Lineup of various attenuations between 0 and 10 dB (1dB step)
- Compact size and low impedance mounting (1005size、face-down mounting)

Applications

- Wireless communication devices and base stations
- Wireless communication modules



Part numbering system

ATF 1005 - 50R0 - 03DB - T1

Series Code				Packing quantity : T05 (500pcs) T1 (1,000pcs)
Size : ATF1005				Attenuation: 00dB - 10dB (2digit) Impedance

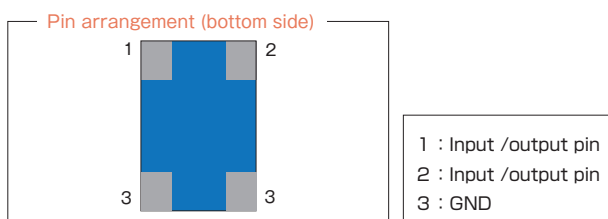
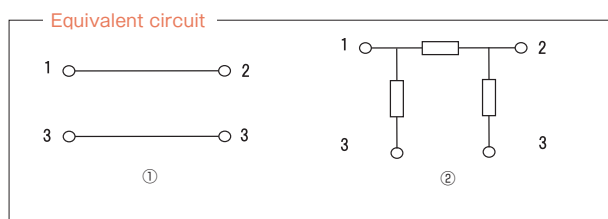
Electrical Specification

Type	ATF1005			
Attenuation	0dB	01 ~ 03dB	04 ~ 07dB	08 ~ 10dB
CircuitType	Thru	Pi(π)	Pi(π)	Pi(π)
Equivalent circuits	①	②	②	②
Attenuation tolerance	$\pm 0.3\text{dB}(0 \sim 10\text{GHz})$, $\pm 0.7\text{dB}(10 \sim 20\text{GHz})$, $\pm 1.0\text{dB}(20 \sim 30\text{GHz})$		$\pm 0.5\text{dB}(0 \sim 10\text{GHz})$, $\pm 0.7\text{dB}(10 \sim 20\text{GHz})$, $\pm 1.0\text{dB}(20 \sim 30\text{GHz})$	$\pm 0.7\text{dB}(0 \sim 10\text{GHz})$, $\pm 1.3\text{dB}(10 \sim 20\text{GHz})$, $\pm 2.0\text{dB}(20 \sim 30\text{GHz})$
V S W R	$\leq 1.3(0 \sim 10\text{GHz})$, $\leq 1.4(10 \sim 20\text{GHz})$, $\leq 1.5(20 \sim 30\text{GHz})$		$\leq 1.3(0 \sim 10\text{GHz})$, $\leq 1.4(10 \sim 20\text{GHz})$, $\leq 1.5(20 \sim 30\text{GHz})$	$\leq 1.3(0 \sim 10\text{GHz})$, $\leq 1.4(10 \sim 20\text{GHz})$, $\leq 1.5(20 \sim 30\text{GHz})$
Impedance	50 Ω			
Operating Frequency	DC ~ 30GHz			
Rated power	32mW			
Rated operating temperature	70 $^{\circ}\text{C}$			
Operating temperature	-40 $^{\circ}\text{C}$ ~ +125 $^{\circ}\text{C}$			
Packaging quantity	500pcs/reel (T05) 1,000pcs/reel (T1)			

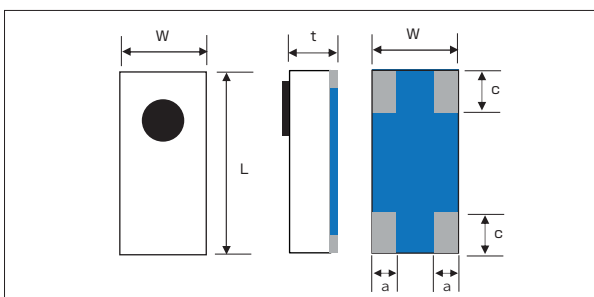
High frequency surface mount components

ATF series

Equivalent Circuit and arrangement



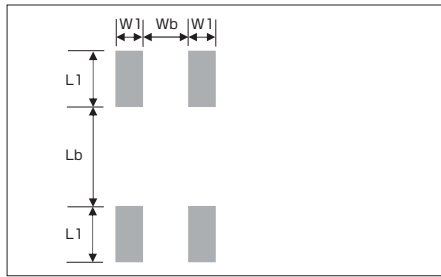
Dimensions



Type	Size	L	W	t	a	c
ATF1005	0402	1.00 \pm 0.10	0.50 \pm 0.10	0.32 \pm 0.05	0.12 \pm 0.07	0.25 \pm 0.07

(unit : mm)

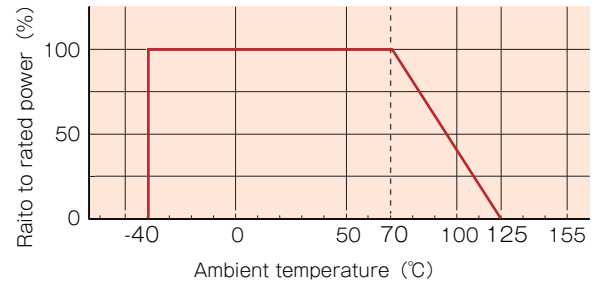
◆ Recommended land patterns(soldering footprints)



Type	W1	Wb	L1	Lb
ATF1005	0.12	0.20	0.25	0.44

(unit : mm)

◆ Derating Curve



◆ High frequency characteristics

