



High Precision chip attenuators (Up to 55GHz)

■ATS-FD series

Features

- Attenuation range up to 55GHz
- Internal circuit specially designed for 0-10dB attenuation.
- Miniature surface mount chip attenuator (1005,2012 size)
- Signal line sandwiched by ground – excellent heat dissipation and low noise.

Applications

- Wireless communication devices and base stations
- Wireless communication modules



◆Part numbering system

ATS 2012 - 10DB - FD - T1

Series Code

Packing quantity :
T1 (1,000pcs) , T05 (500pcs)

Size : 1005, 2012

Face down mounting

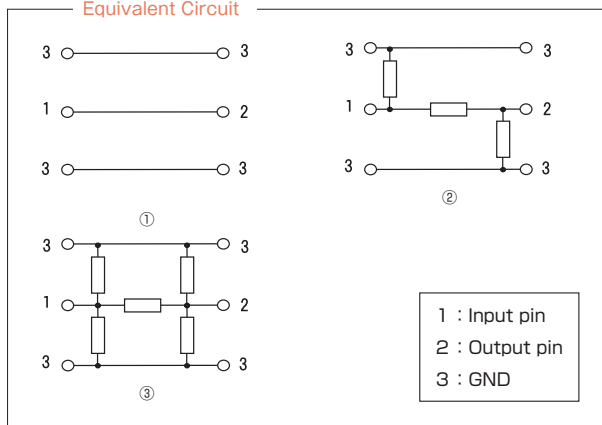
Attenuation

◆Electrical Specification

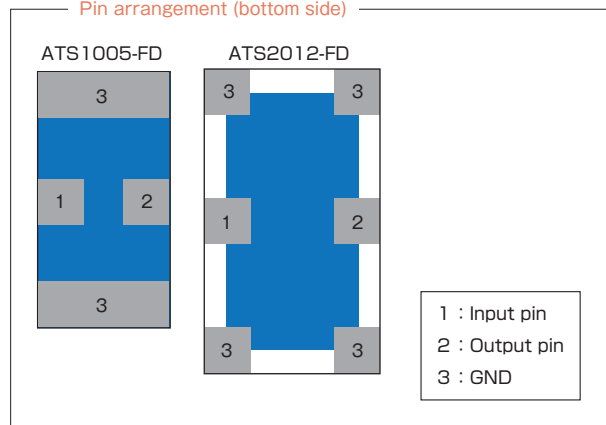
Type	ATS1005-FD		ATS2012-FD		
Attenuation	0dB	1~10dB	0dB	1~8dB	9~10dB
Circuit Type	Thru	Pi(π)	Thru	Pi(π)	Dual Pi (Dual π)
Equivalent circuits	①	②	①	②	③
Attenuation tolerance	± 0.75 (DC ~ 25GHz)、 ± 1.25 dB(25 ~ 40GHz)、 ± 2.50 dB(40 ~ 55GHz)				
V S W R	≤ 1.40 (DC ~ 25GHz)、 ≤ 1.60 (25 ~ 40GHz)、 ≤ 1.80 (40 ~ 55GHz)				
Impedance	50Ω				
Operating frequency	DC~55GHz		DC~55GHz		
Rated power	32mW		100mW		
Rated operating temperature	70℃				
Operating temperature	-40℃~+125℃				
Packaging quantity	500pcs/reel(T05) 1,000pcs/reel(T1)				

◆Equivalent Circuit and pin arrangement

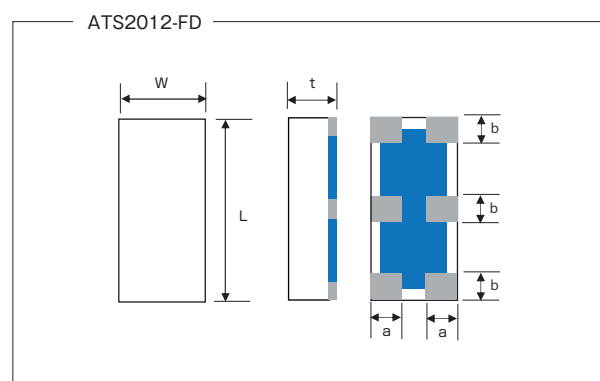
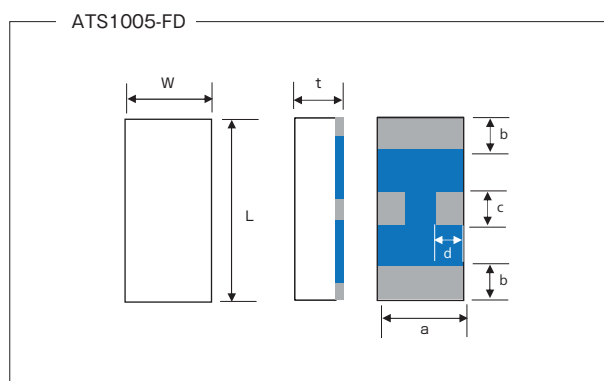
Equivalent Circuit



Pin arrangement (bottom side)



◆ Dimensions

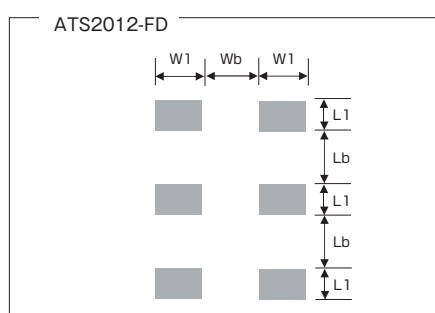
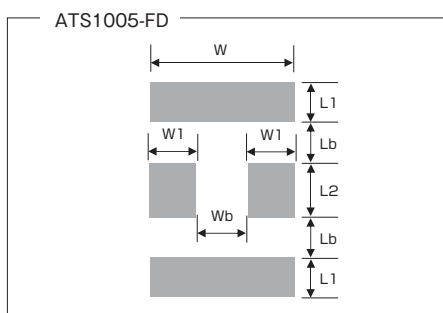


Type	Size (inch)	L	W	t	a	b	c	d
ATS1005-FD	0402	1.00±0.10	0.50±0.10	0.32±0.05	0.44±0.05	0.15±0.05 0.10±0.05 ^{*1}	0.20±0.05	0.15±0.05
ATS2012-FD	0805	2.00±0.20	1.25±0.20	0.22±0.05	0.35±0.10	0.25±0.10	—	—

(unit : mm)

^{*1}: Applies to ATS1005-01DB-FD

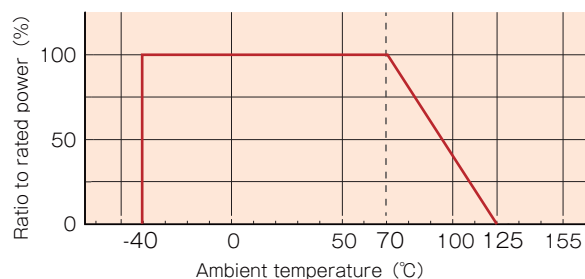
◆ Recommended land patterns(soldering footprints)



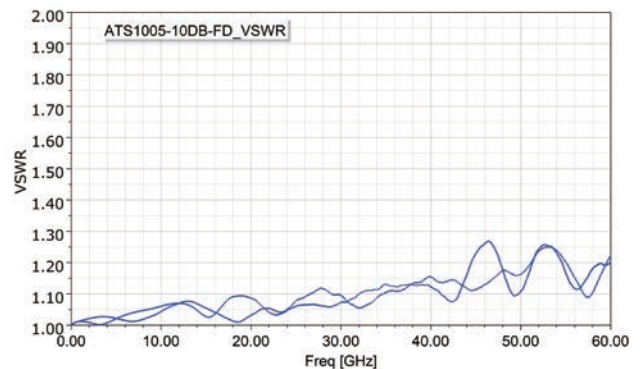
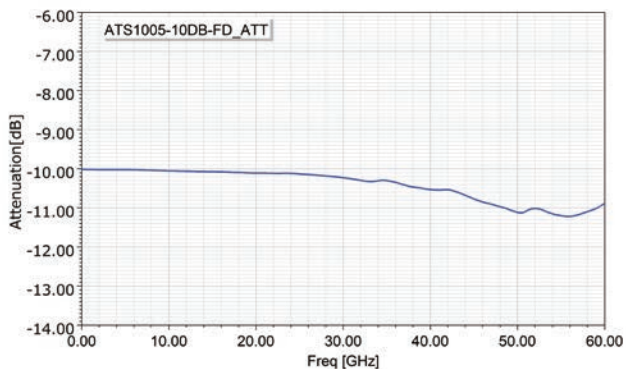
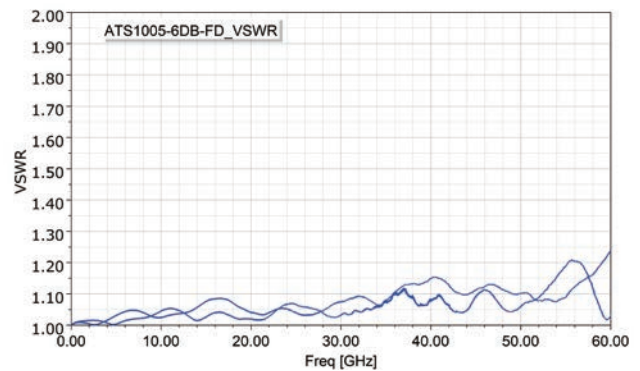
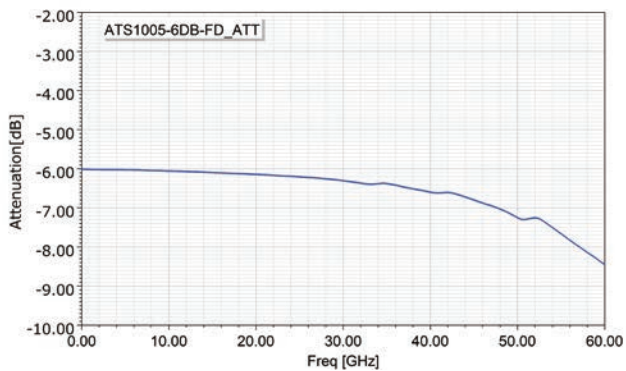
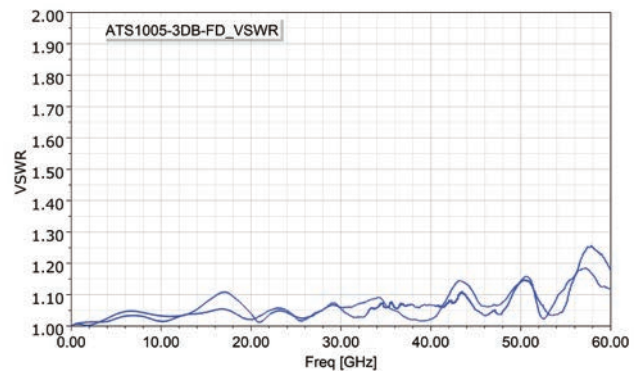
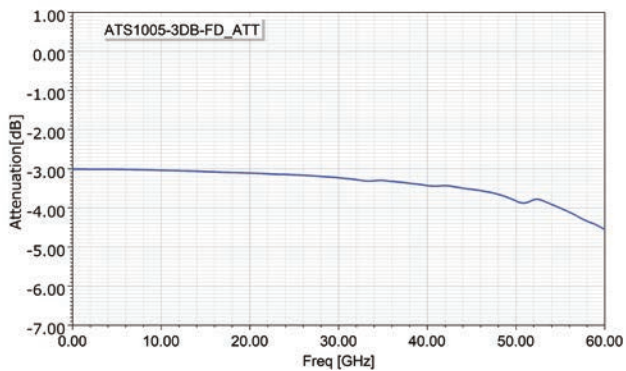
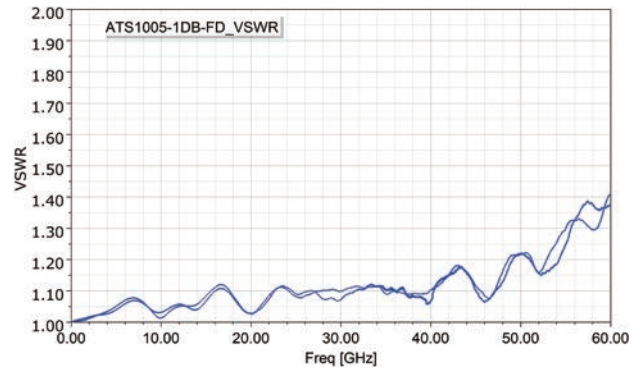
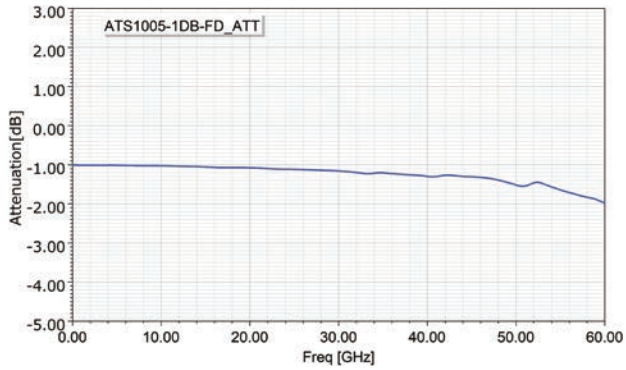
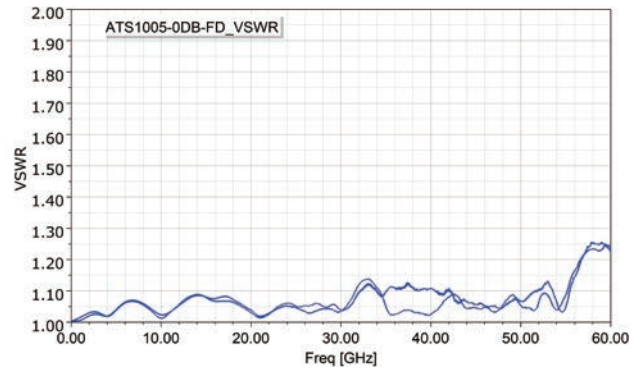
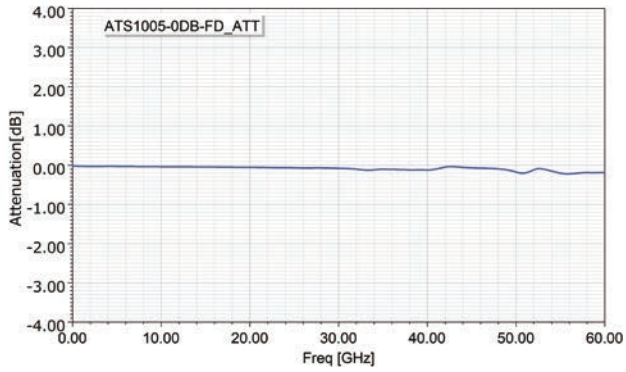
Type	W	W1	Wb	L1	Lb	L2
ATS1005-FD	0.44	0.15	0.14	0.15	0.22	0.20
ATS2012-FD	—	0.35	0.49	0.25	0.60	—

(unit : mm)

◆ Derating Curve



◆ High frequency characteristics



◆ High frequency characteristics

