

## TFA(SMD)Surface Mounted RF Power Attenuators

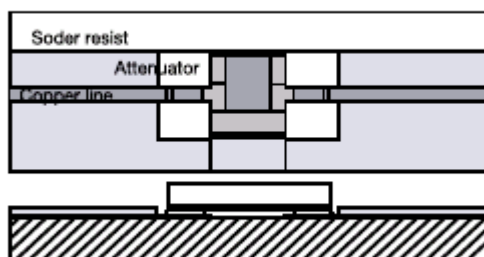


### INTRODUCTION

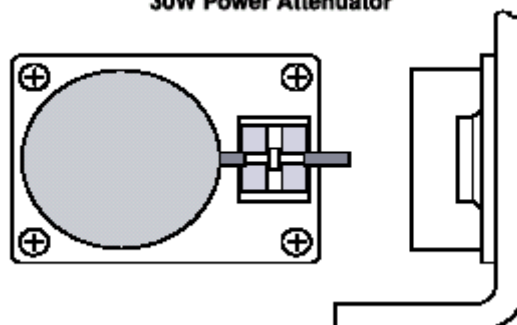
These are 1.5GHz-30W and 4GHz-1/4W surface mounted, small sized attenuators of 50 ohm characteristic impedance. The TFA68D, 1.5GHz-30W, which can attach to a heat sink directly, is Pb and BeO free. The TFA68D is durable and can be used in power consumption in isolators and circulators. The TFA53S and TFA54D 4GHz-1/4W exhibit high durability against pulse /EMI accidents in small signal applications. The Face down configuration on strip line exhibits excellent return loss characteristics. Long life and temperature stability of the thin film technology gives better performance at a temperature range from 55-155C. Applications include: Gain control circuits, isolation circuits of power boost amplifiers, loss compensation of transmission line and data communication systems, detecting signal control of ATE, LSI test systems and circuit board functional test systems, industrial measurement electronics, medical scientific electronics and miscellaneous communication systems.

Model	Rated Power [W]	Impedance [ $\Omega$ ]	Attenuation[dB] (See note)	Frequency [Hz]	Lead
TFA-68DD	30W	50 $\Omega \pm 1 \Omega$	10, 20, 30dB	DC- 1GHz	-
TFA-53SD	0.25W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 4GHz	-
TFA-53SDL	0.25W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 4GHz	Leads
TFA-54DD	0.25W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 4GHz	-
TFA-54DDL	0.25W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 4GHz	Leads
TFA-55SD	0.25W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 4GHz	-
TFA55DD	0.25W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 4GHz	-
TFA-84SD	0.50W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 1GHz	-
TFA-84SDL	0.50W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 1GHz	Leads
TFA-85SD	0.50W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 1GHz	-
TFA-85DDL	0.50W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 1GHz	-
TFA-85DD	0.50W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 1GHz	Leads
TFA-85DDL	0.50W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB	DC- 1GHz	Leads
TFA-37DD	1.00W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB		
TFA-37DDL	1.00W	50 $\Omega \pm 1 \Omega$	1,2,3,4,5,6,7,8,9,10,20,30,40 dB		

Face Down Installation

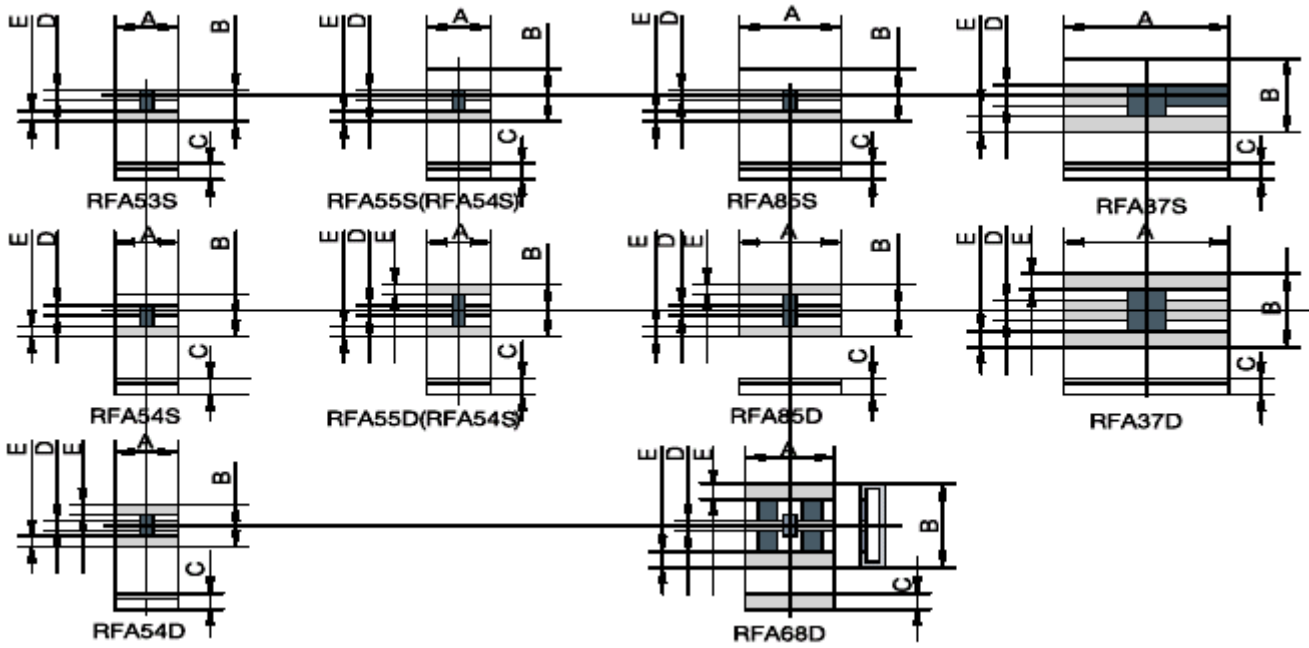


30W Power Attenuator



RF signal will be propagated straightly with out reflection

**DIMENSIONS**



Model	Power[W]	A	B	C	D	E
TFA53	1/4W	5.00	2.70	0.70	1.20	0.80
TFA54S	1/2W	5.00	3.80	0.70	1.20	0.80
TFA54D	1/2W	5.00	3.80	0.70	1.20	0.80
TFA55S(TFA545S)	1/2W	5.00	4.50	0.70	1.20	1.00
TFA55D(TFA545D)	1/2W	5.00	4.50	0.70	1.20	1.00
TFA85S	1W	8.00	5.25	0.70	1.40	1.10
TFA85D	1W	8.00	5.25	0.70	1.40	1.10
TFA68D(Power)	30W	6.70	8.65	1.05	1.00	0.80
TFA37S	2W	13.00	7.00	0.70	2.00	1.40
TFA37D	2W	13.00	7.00	0.70	2.00	1.40

**CHARACTERISTICS**

Tolerance of Impedance	[ ± 2%(G) ] Input DC resistance in terminating output with resistor.
Tolerance of Attenuation	Output VDC in terminating w/resistor when stable 1V DC source connect to input.
TC of Impedance	TC of input DC resistance in terminating output with resistor.
TC of Attenuation	TC of output VDC in terminating w/resistor when stable 1V DC source connect to input.
Rating Temperature	-55 °C ~ 70 °C
Soldering Heat	350 °C , 3 seconds dipping.
Solder ability	[95% covered]
Humidity	Input DC resistance change: 40C, 90-95%RH, rating power ON-90min, OFF-30min, 1000h
Tolerance of Impedance	Input DC resistance change: 70C, rating power ON-90min, OFF-30min, 1000h
Tolerance of Attenuation	-55C to 155C
TC of Impedance	-55C to 155C

**ORDERING PROCEDURE EXAMPLES**

Ordering Example	Impedance	Attenuation	Tolerance	Power Rating
TFA53SD15dBG000	50ohm	15dB	G(2%)	1/4W
TFA54DD20dBG000	50ohm	20dB	G(2%)	1/4W
TFA85DD20dBG000	50ohm	20dB	G(2%)	1W
TFA68DD10dBG000	50ohm	10dB	G(2%)	30W