

LIMITING AMPLIFIERS

Available in 4 Pin TO-8(TM), 14 Pin DIP (TD), Surface Mount Packages(PN) and Connectorized Housings

Limiting amplifiers operate from 5 MHz to 1 GHz and are useful in protecting circuitry from overdrive damage and for removing amplification modulation from FM signals.

(Listed by increasing Frequency, Typical Noise Figure, and Typical Power Output)

Model	Frequency Range (MHz)	Gain (dB)		Input Power Limiting Range (dBm)		Output Level Saturated (dBm)		Output Power Flatness MAX (dB)	Noise Figure (dB) MAX	VSWR MAX	Power Typ	
		Typ	Min	Typ	Min	Typ	Min				(Vdc)	(mA)
TDL9552	5-500	32.0	30.0	-23 to +7	-2.0	-4.0	±0.5	11.1	2.0:1	±15	±60	
TDL9053	5-500	38.0	30.0	-30 to +10	-0.5	-2.0	±1.0	10.0	2.0:1	+15	70	
TML9052	5-500	8.5	7.0	-3 to +7	-2.0	-4.0	±0.5	11.0	2.0:1	±15	±80	
TML9053	5-500	9.5	8.0	-6 to +7	-2.0	-4.0	±1.0	10.0	1.5:1	+15	20	
TML9002	50-500	12.5	11.0	0 to +20	+1.5	+1.3	±1.0	9.0	2.0:1	+15	54	
TML9004	450-500	10.0	9.0	0 to +20	+13.5	+12	±1.0	9.0	2.0:1	+12	50	
TML9017	10-1000	11.5	9.5	0 to +20	+15.0	+13	±1.0	7.5	2.2:1	+15	36	
PNL9654	10-1000	5.5	5.2	-25 to +10	0	-4.0	±0.4	9.0	2.2:1	+15	80	

VOLTAGE VARIABLE ATTENUATORS & LINEARIZERS

Available in 5 Pin TO-8, Flatpacks, Surface Mount Packages and Connectorized Housing

These units operate from 5 MHz to 2 GHz and allow system gain control. Attenuators may be cascaded to increase their attenuation range.

Model	Frequency Range (MHz)		Insertion Loss (dB)		Attenuation (dB)		VSWR Max	Control Voltage Vcon	Control Current (mA)	Bias Voltage (Vdc)	Bias Current (mA)
	Typ	Max	Typ	Min							
TG9015	5	1000	2.0	2.5	20	15	2.0:1	0 to -10	0 to 7	+15	7
TG9001	5	2000	2.0	2.5	34	18	2.0:1	0 to +15	0 to 6.5	+15	10
TG9006	5	2000	2.0	2.5	34	18	2.0:1	0 to +12	0 to 6.5	+12	10
TG9025	5	2000	2.0	3.0	33	20	2.0:1	0 to +15	0 to 7	+15	10
TG9030	100	2000	2.5	3.5	40	25	2.2:1	0 to +15	0 to 10	+15	10
TG9035	100	2000	3.0	4.0	30	20	2.0:1	0 to +15	0 to 10	+15	10

Model	Frequency Range (MHz)		Typ Current Drain (mA)							Linearity 3-20 (dB) Attenuation	
	VDC	Min Atten	V-		V+		Vcon			Typ	Max
TL9003	+15	5	31	15	5	21	25	<+1dB	+2dB		
TL9007	+12	5	31	15	5	21	25	<+1dB	+2dB		

DETECTORS

Available in 4 Pin TO-8, Flatpacks, Surface Mount Packages

Temperature compensated detectors operate from 10 MHz to 2 GHz and are available as both level and threshold types.

Threshold	Frequency Range (MHz)		Input Flatness (dBm)	Input Operating Range (dB)			VSWR Max In/Out	Power Typ	
	(Vdc)	(mA)							
TJM9904	10	2000	±1.0	-25 to +10	2.2:1	+15	5		
TJM9902	10	2000	±0.7	-10 to +10	2.0:1	+15	12		
PLJ9962	100	2000	±1.0	-10 to +10	2.0:1	+15	12		

Level	Frequency Range (MHz)		Detected Voltage (mV) Typ	Input Flatness (dBm)	Tangential Sensitivity w/ a Bandwidth of 1 MHz (dB)		VSWR Max In/Out	Power Typ	
	(Vdc)	(mA)							
TJM9910	10	1000	120	±1.0	-45	40	1.7:1	+15	10
TJM9911	10	2000	120	±1.0	-45	40	1.7:1	+15	10
LNJ9901	20	2000	100	±0.3	-38	-	2.2:1	±15	2