



Limiting Amps and Limiters

High Performance Limiting Amplifiers and Limiters Typical and Guaranteed Specifications—50 Ω System

Model	Frequency Range MHz	Small Signal Gain dB			Gain Flatness ±dB		Noise Figure dB		Power Output At 1dB Compression dBm			Output Limiting Level +20 dBm Input			SWR In/Out		D.C.	
		Typ.	Min. 0/50C	Min. -55/85C	Max. 0/50C	Max. -55/85C	Max. 0/50C	Max. -55/85C	Typ	Min. 0/50C	Min. -55/85C	Typ	Max. 0/50C	Max. -55/85C	Max. 0/50C	Max. -55/85C	Volts Nom.	mA Typ.
Limiting Amplifiers • Available in TO-8, SMA, and Surface Mount Packages																		
LA507	50-500	13.0	12.5	11.5	0.5	0.7	6.5	7.0	12.0	11.0	9.0	16.2	17.2	18.0	1.7	1.9	15	51
LA1017	10-1000	12.5	11.5	11.0	0.5	0.7	6.7	7.2	13.5	12.5	12.0	15.5	16.5	17.0	1.7	1.8	15	45

Model	Frequency Range MHz	Insertion Loss dB			Maximum Limiting Output Level +20 dBm Input						SWR In/Out		Bias Voltage
		Typ.	Min. 0/50C	Min. -55/85C	20V Typ.	20V Max.	15V Typ.	15V Max.	10V Typ	10V Max.	Max. 0/50C	Max. -55/85C	
Limiters • Available in TO-8, SMA, and Surface Mount Packages													
LC1501	50-1500	2.7	3.5	4.0	+2.0	+3.0	+1.0	+2.0	-1.0	0.0	2.0	2.0	5 to 20
LC1502	5-1500	2.7	3.5	4.0	+2.0	+3.0	+1.0	+2.0	-1.0	0.0	2.0	2.0	5 to 20
LC2034	500-2400	2.5	3.5	4.0	+2.2	+3.2	+1.0	+2.0	-1.0	—	2.0/2.2	2.0/2.2	5 to 20
LC3005	5-3000	0.6	1.0	1.5	—	—	—	—	+15.0 [^]	+16.0 [^]	1.5	1.7	—
LS6001	1000-6000	2.5	3.2	3.7	+4.8	+5.2	+2.5	+3.0	—	—	2.0	2.1	15 to 20

Model	Frequency Range (MHz)	Input Power Limited Range (dBm) Min.	Saturated Output Power (dBm) Min.	Output Power Flatness (dBm) Max.	Noise Figure (dBm) Max.	Operating Bias (VDC)	Case Type
IF/RF Limiting Amplifiers • Guaranteed Specifications at 0° to 50°C Case Temperature							
UTL or PSL-502	5-500	-3 to +7	-4.0	±0.5	11	+15, -15	TO-8F or SM-45
UTL or PSL-503	5-500	-5 to +7	-4.0	±1.0	10	+15	TO-8U or SM-45
UDL-503	5-500	-30 to +10	-2.0	±1.0	10	+15	DIP

Model	Frequency Range (MHz)	Input Power Limited Range (dBm) Min.	Saturated Output Power (dBm) Max.	Insertion Loss (dBm) Max.	Operating Bias (VDC) Nominal	Case Type
Voltage Controlled Limiters • Guaranteed Specifications at 25°C Case Temperature						
UTL or PSL-1001	50-1000	0 to +20	-5 to +21	3.71	+5 to +20	TO-8U or SM-45
UTL or PSL-1002	5-1000	0 to +20	-5 to +21	3.71	+5 to +20	TO-8U or SM-45

Current data sheets available on website. [^] LC3005 performance at 0 Volts, +28 dBm input level.