

# Limiting Amplifiers 0.5 GHz to 18 GHz

- ✓ **Solid-State**
- ✓ **Frequency Coverage from 0.5 to 18 GHz**
- ✓ **MIC Thin-Film Design for High Reliability**



Limiting amplifiers operate in the saturated region of their transfer function, thereby, minimizing output power variations and providing constant output over a wide input dynamic range. They are especially effective at minimizing the harmonic content of output power under limiting conditions and reproducing pulsed input signals with high fidelity by minimizing overshoot and recovery times.

Limiting amplifiers are useful in applications, which require tightly controlled power

delivered over a wide range of input drive or over wide frequency ranges or even wide temperature ranges. Typical applications include:

- Local oscillator networks
- Microwave phase/frequency discriminators
- Protecting circuitry from overdrive damage
- Removing amplification modulation from FM signals
- Instantaneous frequency measurement receivers

Limiting Amplifiers – 0.5 GHz to 18 GHz

Model Number	Frequency Response (GHz)	Gain (dB)	Gain Flatness (±dB)	Noise Figure (dB)	Psat (+dBm)	VSWR In/Out	Volts (DC)	DC Current (mA)	Case
	Min	Min	Max	Max	Min-Max	Max	Typ	Typ	
LSM/020-1630	.5-2	30	1.25	7.0	16-20	2:1	12	180	HC2
LSM/020-1640	.5-2	40	1.50	6.0	16-20	2:1	12	300	HC4
LSM/020-1670	.5-2	70	2.00	7.0	16-20	2:1	12	500	HC4/HC4
LSO/040-1640	2-4	40	1.50	3.5	16-20	2:1	12	320	HC4
LSM/060-1627	2-6	27	1.50	7.0	16-20	2:1	12	240	HC2
LSM/060-1635	2-6	35	1.50	6.0	16-20	2:1	12	320	HC2
LSM/060-1660	2-6	60	2.00	7.0	16-20	2:1	12	560	HC2/HC2
LSM/1080-1627	2-8	27	1.50	6.0	16-20	2:1	12	240	HC2
LSM/080-1635	2-8	35	1.50	4.0	16-20	2:1	12	320	HC4
LSO/080-1735	4-8	35	1.50	4.5	17-21	2:1	12	320	HC4
LSX/0218-1730	2-18	30	2.00	7.5	17-21	2:1	12	500	HX4
LSX/0218-1740	2-18	40	2.00	7.5	17-21	2:1	12	600	HX6
LSX/0218-1770	2-18	70	3.50	7.5	17-21	2:1	12	1200	HX4/HX6
LSM/180-1435	6-18	35	1.50	7.5	14-18	2:1	12	450	HX4
LSM/180-1445	6-18	45	2.25	7.5	14-18	2:1	12	520	HX6
LSM/180-1480	6-18	80	3.50	7.5	14-18	2:1	12	960	HX4/HX6

## New Products

### Comments:

1. Harmonics: -10 dBc typical at the input power up to +10 dBm.
2. Pulse response:
  - Overshoot: 0.5 dB, max
  - Recovery time: 50 ns, max
  - Settling time: 25 ns, max
  - Rise time: 20 ns, max
3. Temperature compensation, signal suppression and phase matching are optional.
4. All units contain built-in voltage regulator and reverse voltage protection diode.