

# DIODE LIMITERS

# SERIES LT

## 0.1-18 GHz

### GENERAL INFORMATION:

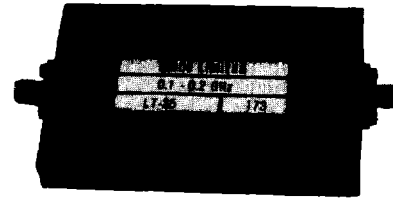
The LT series high speed Diode Limiters (receiver protectors) are used at the input of sensitive receivers in order to protect them against accidental burnout caused by high levels of CW or pulsed power. Most models are built in "air-free" solid dielectric stripline, and can therefore handle high values of peak power.

### GENERAL SPECIFICATIONS:

**Frequency Range:** 0.1 to 18.0 GHz  
**RF Impedance:** 50 Ohms  
**Operating Temperature:** -55°C to +85°C  
**Environment:** MIL-E-5400.  
**Connectors:** SMA standard, others on request.

### Notes:

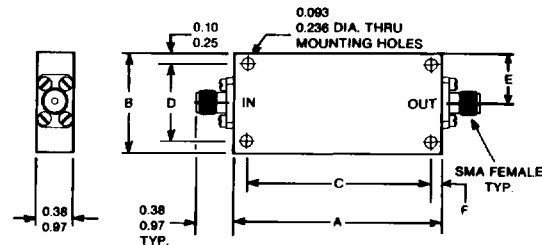
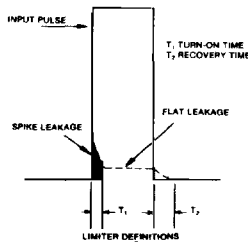
- See Figure 1 for limiter definition.
- Limiters having higher peak and average power capability can be supplied.
- Peak power specified is for 10  $\mu$ s pulse width for frequencies to 2 GHz and 1  $\mu$ s for frequencies above 2 GHz.
- If a narrow frequency bandwidth is required KDI/Triangle Electronics can supply a unit that is electrically optimized for that bandwidth. Mechanical dimensions will remain the same as the standard unit, and the price will generally be lower. Specify the frequency range when ordering a narrow bandwidth model and a special part number will be assigned.
- To insure full limiting the applied RF power should exceed 100 watts peak or 30% of the maximum peak power rating.



### MECHANICAL OUTLINES

OUTLINE	A Inches cm.	B Inches cm.	C Inches cm.	D Inches cm.	E Inches cm.	F Inches cm.
1	3.00	2.00	2.600	1.800	0.50	0.20
	7.62	5.08	6.600	4.510	1.27	0.51
2	0.80	0.60	—	0.400	0.30	0.40
	2.03	1.62	—	1.020	0.76	1.02
3	0.95	0.75	—	0.500	0.50	0.48
	2.41	1.91	—	1.270	1.27	1.21
4	0.80	0.60	—	0.400	0.25	0.40
	2.03	1.62	—	1.020	0.64	1.02
5	2.00	1.38	1.600	1.175	0.25	0.20
	5.08	3.51	4.064	2.984	0.64	0.51

FIG. 1



### ELECTRICAL PERFORMANCE

Model No.	Frequency Range, GHz	Max. VSWR	Max. Insertion Loss, dB	Max. Peak Power, kW	Max. Avg. Power Watts	Max. Flat Leakage, mW	Max. Spike Leakage Ergs	Max. Turn-on Time, nanosec	Max. Recovery Time, nanosec	Outline
LT-35	0.1-0.2	1.10	0.35	5.0	20	50	0.10	5	150	1
LT-38	0.1-1.0	1.25	0.35	3.0	10	50	0.10	5	150	1
LT-42	0.2-0.5	1.20	0.35	6.0	20	50	0.10	5	150	1
LT-44	0.2-0.3	1.20	0.35	6.0	20	50	0.07	5	150	1
LT-47	0.5-1.0	1.25	0.35	2.0	20	50	0.10	5	150	3
LT-49	0.7-0.95	1.20	0.45	6.0	50	50	0.07	5	150	5
LT-52	0.95-1.25	1.25	0.45	6.0	50	50	0.07	5	150	5
LT-55	1.0-2.0	1.30	0.50	2.0	10	50	0.10	5	150	4
LT-59	1.02-1.10	1.20	0.45	6.0	60	50	0.05	5	150	5
LT-62	1.2-1.4	1.20	0.50	5.0	30	50	0.07	5	150	5
LT-64	1.5-1.6	1.20	0.50	6.0	60	50	0.07	5	150	3
LT-67	1.75-1.85	1.20	0.50	4.0	20	50	0.07	5	150	3
LT-68	2.0-4.0	1.40	0.60	0.80	10	50	0.10	6	30	2
LT-71	2.2-2.3	1.40	0.60	4.0	10	50	0.10	6	150	3
LT-74	3.3-3.7	1.40	0.70	0.80	20	50	0.10	6	30	2
LT-78	4.4-5.0	1.25	0.70	0.80	10	50	0.05	4	30	2
LT-82	5.4-5.9	1.25	1.00	0.80	20	50	0.05	4	30	2
LT-85	7.9-8.4	1.30	1.00	0.80	10	80	0.05	4	30	2
LT-87	10.0-10.3	1.25	1.00	0.80	5	80	0.05	4	100	2
LT-89	15.0-16.0	1.30	1.40	0.30	5	80	0.05	4	30	2
LT-76	4.0-8.0	1.40	1.00	0.75	5.0	80	0.10	5	30	2
LT-83	7.0-12.4	1.50	1.50	0.30	4.0	50	0.07	5	30	2
LT-86	8.0-18.0	2.00	1.70	0.30	4.0	80	0.07	5	30	2
LT-88	12.0-18.0	2.00	1.70	0.30	4.0	80	0.07	5	30	2
<b>BROADBAND MODEL</b>										
LT-98	1.0-18.0	2.00	2.50	0.40	2.0	80	0.07	5	30	2

**KDI/triangle  
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