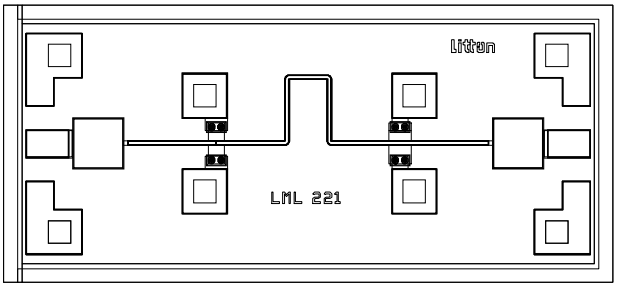
Features

- 0.5 dB Insertion Loss
- +15 dBm Leakage Power
- 4-6 Watts Burn-Out Power Typical
- -15 dB Input/Output Return Loss Typical
- 2-20GHz Frequency Bandwidth
- 40 nS Pulse Recovery Time
- DC Decoupled RF Input and Output
- Chip Size : 1.62 mm x 0.74 mm (0.064" x 0.029")
- Chip Thickness : 100µm
- Pad Dimension : 100µm^2



Description

The Filtronic LML 221 Limiter is a MIN (Mott) diode limiter featuring low insertion loss, excellent pulse recovery time, and low spike leakage energy. The diode structure features a very stable Pt / Ti / Au Schottky contact, with low resistance ohmic AuGe / Ni / Au ohmic contacts. The MIN structure allows for a large diode area for improved maximum burn-out power levels while retaining wide-bandwidth performance. The MIN diodes do not generate minority carriers, thereby offering superior pulse recovery and spike leakage performance as compared to standard PIN limiters.

Electrical Specifications at T_A=25°C

Symbol	Parameter	Test Conditions	Limits			Units
			Min.	Typ.	Max.	
BW	Operating Bandwidth		2		20	GHz
S21	Insertion Loss	P_{IN} = 0 dBm		0.35	1.0	dB
P_{LK}	Leakage Power	$P_{IN} \geq$ 10 dBm		13	15	dBm
P_{MAX}	Maximum Input Power (CW)		4	6		W
P_{MAX}	Maximum Input Power (Pulsed)	Duration ≥ 1µsec, 10% Duty Cycle	4	6		W
RL_{IN}	Input Return Loss	$P_{IN} \leq$ 10 dBm	-10	-15		dB
RL_{OUT}	Output Return Loss	$P_{IN} \leq$ 10 dBm	-10	-15		dB
T_R	Recovery Time	P_{IN} = 1W 10%-90% Recovery		40	50	nS
E_{LK}	Spike Leakage Energy	P_{IN} = 1W		0.1	0.2	erg

Absolute Maximum Ratings

Symbol	Parameter/Conditions	Min.	Max.	Units
P_{IN}	RF Input Power		10	W
T_{OP}	Operating Temperature Range	-45	95	°C
T_{STG}	Storage Temperature	-65	165	°C
T_{MAX}	Max. Assembly Temp. (1 min. max.)		300	°C

Note : Specifications subject to change without notice.

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