

## C-band TR Limiter

### ■ GENERAL DESCRIPTION

TL3999VDT(L) is a C-band TR Limiter consisting of a TR tube and a diode limiter.



### ■ RADIOACTIVE MATERIAL

TR tube contains Americium241 (2.96kBq).

### ■ MAXIMUM AND MINIMUM RATINGS(ABSOLUTE)

These ratings cannot necessarily be used simultaneously and no individual ratings should be exceeded.

PARAMETERS	Min	Max	Units
Transmitter power (peak)	—	70	kW
Transmitter power (average)	—	70	W
Storage temperature	-40	+70	°C
Operating temperature	0	+55	°C
Pulse duration	—	3.5	μs
Pulse repetition rate	200	2400	pps
Duty cycle	—	0.0012	—

### ■ ELECTRICAL CHARACTERISTICS

PARAMETERS	Min	Max	Units
Frequency range	5500	5700	MHz
VSWR (note 1, note 2, note 3)	—	1.4	—
Insertion loss (1) (note 1, note 2)	—	1.0	dB
Insertion loss (2) (note 1, note 3, note 7)	—	0.8	dB
Flat leakage power (note 4, note 5)	—	50	mW
Spike leakage energy (note 4, note 5)	—	0.05	erg
Spike leakage power (note 4, note 6)	—	150	mW
Recovery time (note 4, note 6, note 7)	—	2.0	μs

**■ LIFE TEST**

Life Test conditions		Units
Frequency	5600	MHz
Peak power	70	kW
Duty cycle	0.001	-
Pulse duration	1.0	μs

Life Test End Points

PARAMETERS	Min	Max	Units
Insertion loss (note 1, note 4)	—	1.0	dB
Flat leakage power (note 4, note 5)	—	70	mW
Spike leakage energy (note 4, note 5)	—	0.07	erg
Recovery time (note 4, note 6)	—	4.0	μs

**Notes**

1. Measured at power level 0.1mW CW.
2. Measured at 5500MHz and 5700MHz.
3. Measured at 5600MHz and 5650MHz.
4. Measured at 5600MHz.
5. Measured at p0=70kW, tp1=1.0μs, tp2=0.5μs and 1000pps.
6. Measured at p0=70kW, tp=1.0μs and 1000pps.
7. It depends on a temperature. See Fig.1 and Fig2.

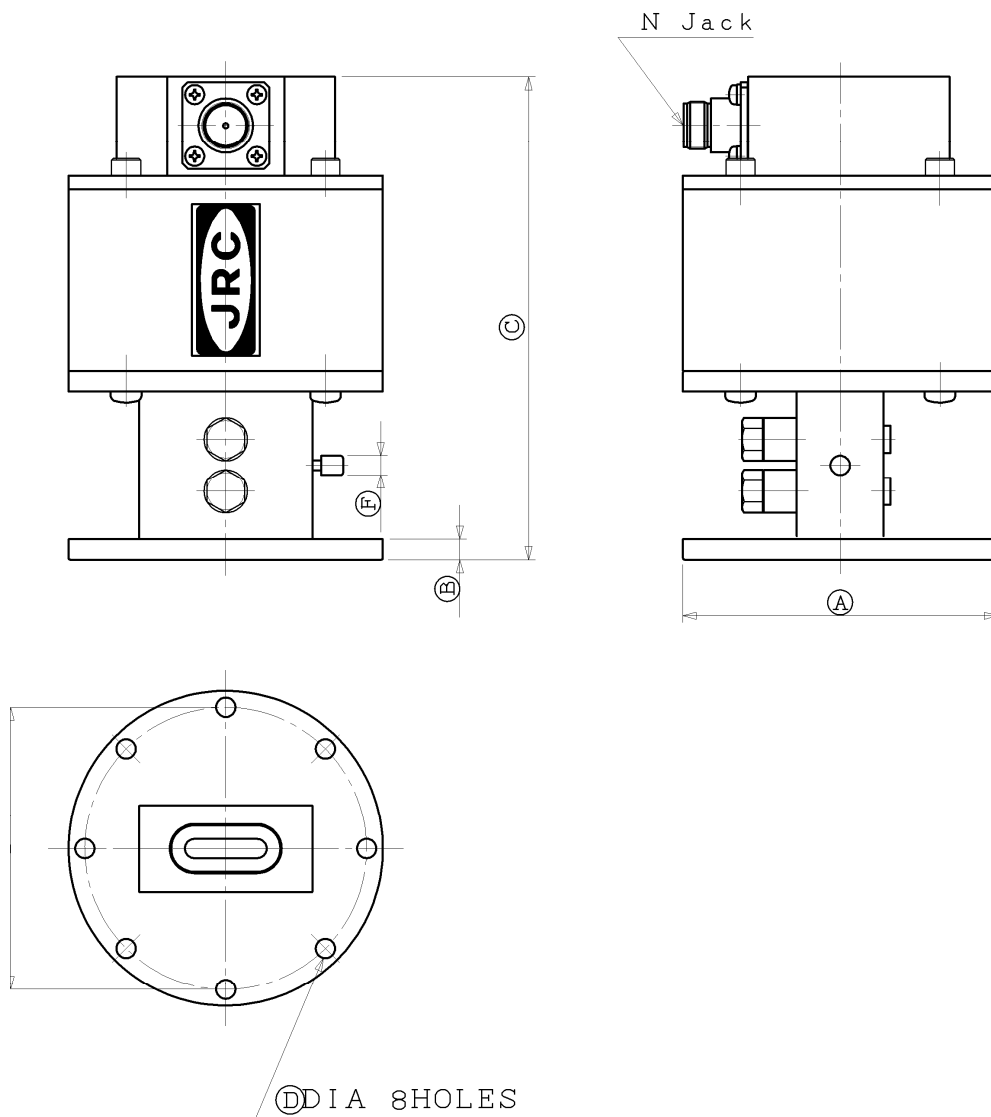
## ■ OUTLINE TL3999VDT(L)

### OUTLINE DIMENSIONS

(All dimensions without limits are nominal.)

Unit: mm

Sym- bol	DIMENSION	
	Min.	Max.
A	φ92.1	
B	6	
C	—	150
D	φ5.6	φ5.8
E	φ82.55	
F	φ5.9	



■ TECHNICAL INFORMATION

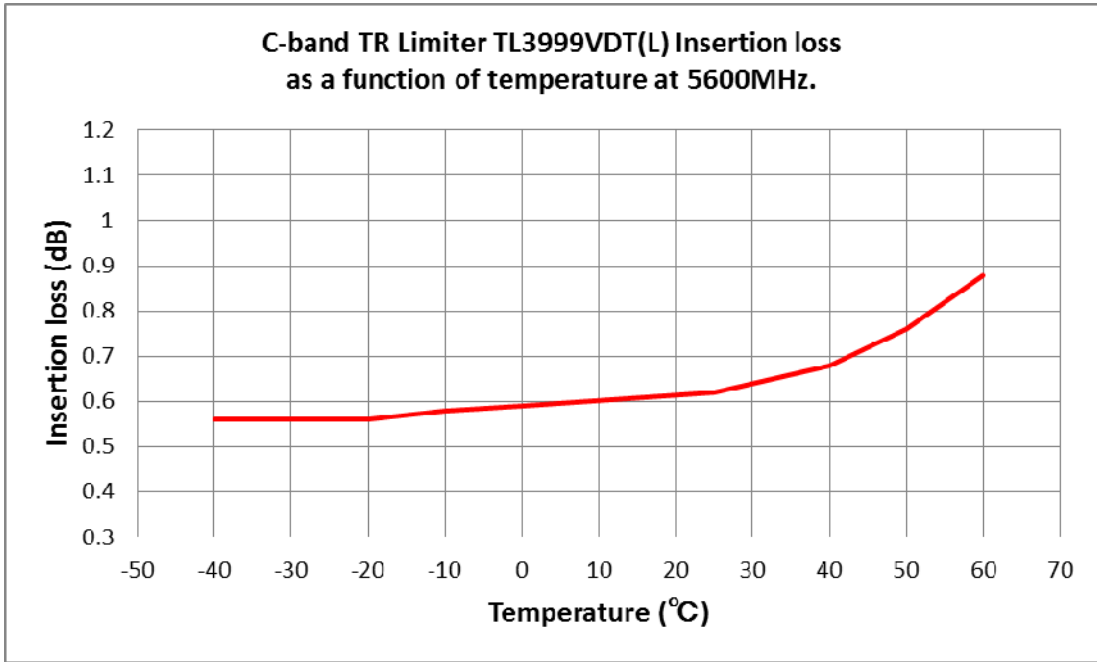


Fig.1. Insertion loss

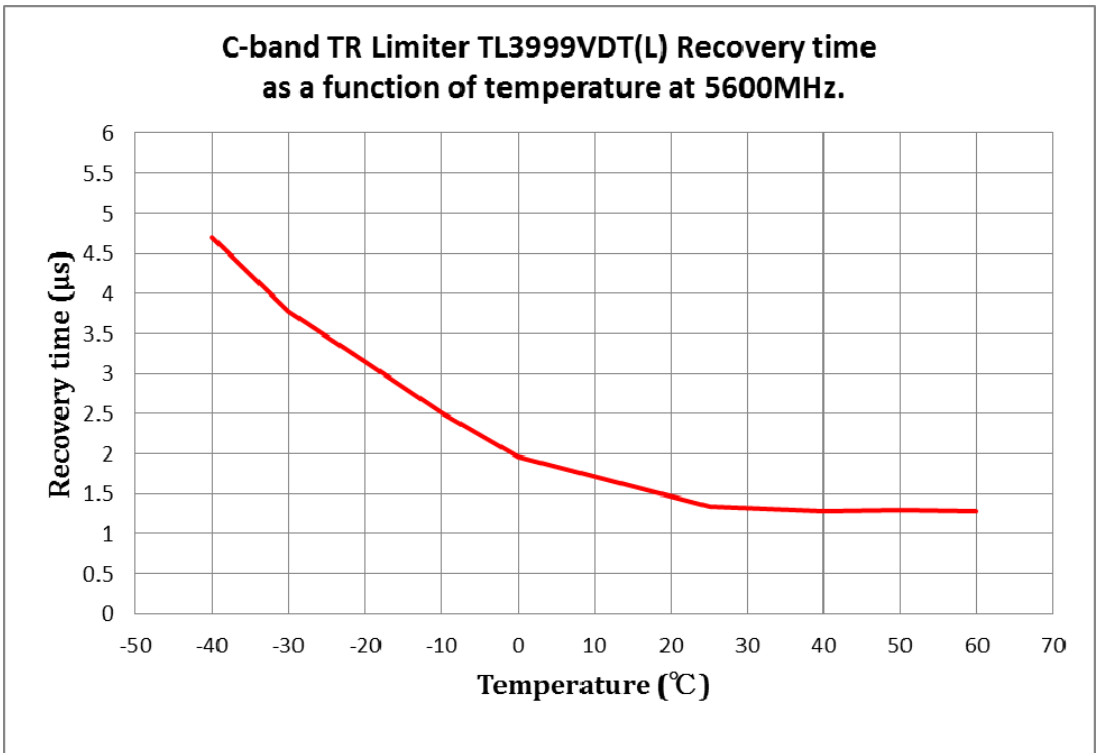


Fig.2. Recovery time