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## Released

# X-band TR Limiter Model No. TL393

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	Title:		
Nisshinbo Micro Devices Inc.	Datasheet of TL393		
Microwave Business Headquarters	Reference No.:	Rev.:	Sheet:
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### **■** GENERAL DESCRIPTION

TL393 is a broad band primer less TR Limiter designed specifically for use with X-band radars. Consisting of a TR tube and 2 stages diode limiter, TL393 is a small, rugged device, which protects the LNA or the mixer diode in the receiver from burning out as a result of RF power coming from other radars. Non-radioactive isotope is included for the ignition.



### ■ ELECTRICAL CHARACTERISTICS < at 25 °C >

PARAMETERS		MINIMUM	MAXIMUM	UNITS
Frequency range		9300	9500	MHz
V.S.W.R.	(Note 1)	1	1.5	-
Insertion loss	(Note 1,3)		2.0	dB
Flat leakage power	(Note 2,3)		25	mW
Spike leakage power	(Note 2,3)		400	mW
Recovery time	(Note 4)		2.0	μs

Note 1: Measured at input power level 0.1mW CW.

Note 2: Measured at 50kW, 1.0µs pulse width and 1000 p.p.s.

Note 3: Measured at frequency 9410 MHz.

Note 4: Measured at 5kW, 1.0µs pulse width and 1000 p.p.s. 3dB recovered point.

### ABSOLUTE MAXIMUM RATINGS

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

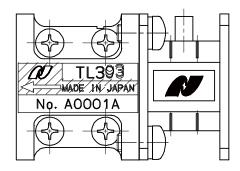
PARAMETERS	MINIMUM	MAXIMUM	UNITS
Transmitter power (Peak)	-	100	kW
Operating temperature	-30	+75	$^{\circ}$
Ambient temperature	-30	+90	$^{\circ}$
Pulse duration	-	1.2	μs

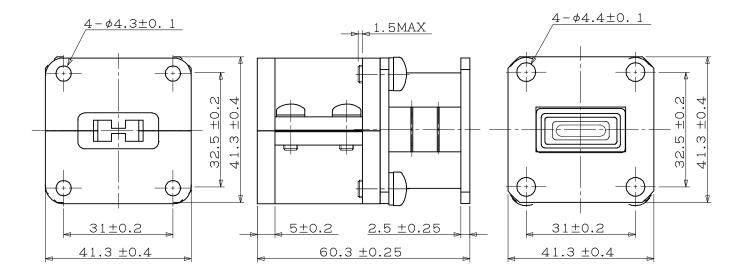
<sup>\*</sup>Above Specifications are subject to change without notice.

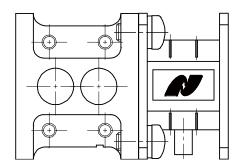


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### **■** OUTLINE







(Dimensions are expressed in "mm".)

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