PRODUCT DATA

Micro International, Inc

PART NUMBER

LDT3904 and LDT3904T

Micro-LID NPN Transistor

Micro International, Inc.
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Micro-LID Transistors
LDT3904 and LDT3904T

Description:

The LDT3904 (untinned) and LDT3904T (tinned) are NPN silicon transistors in very small, rugged, surface mount, 4-post ceramic packages (Micro International manufactured package p/n 4-075-1). The LDT3904 and LDT3904T meet the general specifications of the 2N3904 transistor. The 4-075-1 Micro-LID package is a 4-post, leadless ceramic carrier which can be provided with gold metallized or pre-tinned lands, and is approved for military, medical implant, sensor, and high reliability applications. The LDT3904 and LDT3904T can be provided with special feature options such as additional temperature cycling and screening.

Maximum Ratings:

Parameter	Symbol	Rating
Collector-Base Voltage	Vcbo	60 V
Collector-Emitter Voltage	Vceo	40 V
Emitter-Base Voltage	Vebo	6 V
Collector Current	Ic	200 mA
Total Dissipation	Pt	350 mW
Operating Junction Temperature	Tj	150°C
Storage Temperature	Tstg	-65°C to 150°C
Operating Temperature	Toper	-55°C to 125°C

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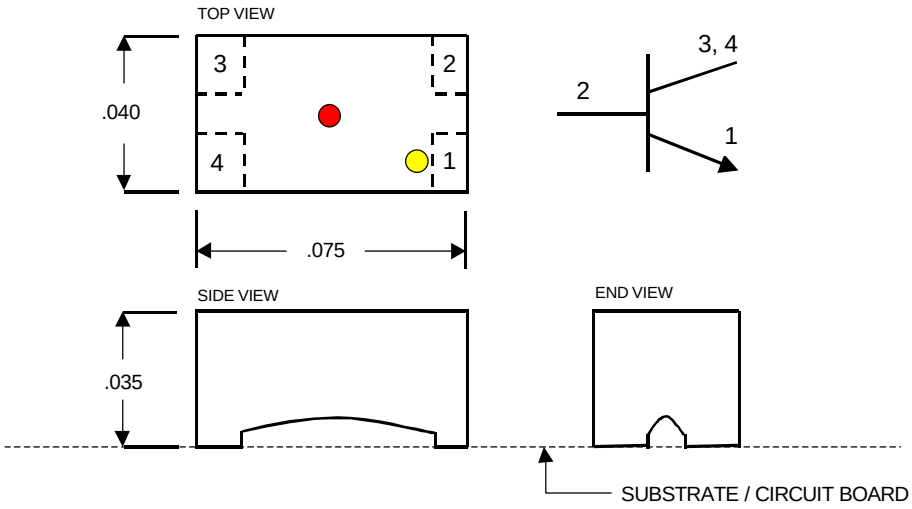
Outline / Schematic:



Dimensions / Marking:

Length	.075″ ± .003″	Post 1 (Emitter)	.015″ x .010″ typ
Width	.040″ ± .003″	Post 2 (Base)	.015″ x .010″ typ
Height	.035″ ± .003″	Post 3,4 (Collector)	.015″ x .012″ typ

Marking on back of package : Yellow Dot over Emitter and Red Dot in Center
(post down configuration)

Standard In-Process Screening Requirements:

- Semiconductor die and Micro-LID package visual inspection
- Wire pull test
- 24 hour stabilization bake at 150°C
- 10 temperature cycles from –55°C to 125°C
- 100% electrical test of dc characteristics at 25°C
- Final visual inspection

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Electrical Characteristics (25°C Ambient)

Parameter	Symbol	Min	Typ	Max	Units
Collector-Base Breakdown Ic = 10 uA, Ie = 0	BVcbo	60	--	--	V
Collector-Emitter Breakdown* Ib = 0, Ic = 10 mA	BVceo	40	--	--	V
Emitter-Base Breakdown Ic = 0, Ie = 10 uA	BVebo	6	--	--	V
Collector-Base Cutoff Current Vcb = 30 V	Icbo	--	--	50	nA
Emitter-Base Cutoff Current Veb = 4 V	Iebo	--	--	100	nA
DC Forward Current Gain* Ic = 10 mA, Vce = 5 V	Hfe	100	--	300	
Collector-Emitter Saturation Ic = 50 mA, Ib = 5 mA	Vce (sat)	--	--	.25	V
Base-Emitter Saturation Ic =50 mA, Ib = 5 mA	Vbe (sat)	--	--	.9	V
Collector Capacitance Vcb = 5 V, Ie = 0 f = 1 MHz	Cobo	--	--	4	pF

* Pulse test, pulse width $\leq$ 300 usec, duty cycle $\leq$ 2%