



PRODUCT DATA



Micro International, Inc

PART NUMBER

LDT2222A and LDT2222AT

Micro-LID NPN Transistor



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**Micro-LID Transistors
LDT2222A and LDT2222AT**

Description:

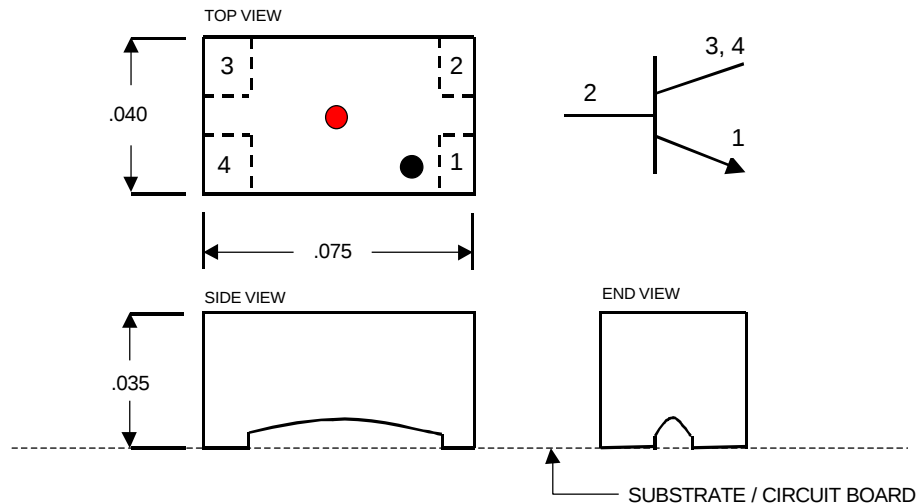
The LDT2222A (untinned) and LDT2222AT (tinned) are NPN silicon transistors in very small, rugged, surface mount, 4-post ceramic packages (Micro International manufactured package p/n 4-075-1). The LDT2222A and LDT2222AT meet the general specifications of the 2N2222A transistor. The 4-075-1 Micro-LID 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 LDT2222A and LDT2222AT can be provided with special feature options such as additional temperature cycling and screening.

Maximum Ratings:

Parameter	Symbol	Rating
Collector-Base Voltage	Vcbo	75 V
Collector-Emitter Voltage	Vceo	40 V
Emitter-Base Voltage	Vebo	6 V
Collector Current	Ic	500 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	$.075'' \pm .003''$	Post 1 (Emitter)	$.015'' \times .010''$ typ
Width	$.040'' \pm .003''$	Post 2 (Base)	$.015'' \times .010''$ typ
Height	$.035'' \pm .003''$	Post 3,4 (Collector)	$.015'' \times .012''$ typ

Marking on back of package : Black 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 $I_c = 10 \mu A, I_e = 0$	BV_{cbo}	75	--	--	V
Collector-Emitter Breakdown* $I_b = 0, I_c = 10 \text{ mA}$	BV_{ceo}	40	--	--	V
Emitter-Base Breakdown $I_c = 0, I_e = 10 \mu A$	BV_{ebo}	6	--	--	V
Collector-Base Cutoff Current $V_{cb} = 60 \text{ V}$	I_{cbo}	--	--	10	nA
Emitter-Base Cutoff Current $V_{eb} = 3 \text{ V}$	I_{ebo}	--	--	10	nA
DC Forward Current Gain* $I_c = 1 \text{ mA}, V_{ce} = 10 \text{ V}$ $I_c = 150 \text{ mA}, V_{ce} = 10 \text{ V}$	H_{fe}	50 100	--	-- 300	
Collector-Emitter Saturation $I_c = 150 \text{ mA}, I_b = 15 \text{ mA}$	$V_{ce}(\text{sat})$	--	--	.3	V
Base-Emitter Saturation $I_c = 150 \text{ mA}, I_b = 15 \text{ mA}$	$V_{be}(\text{sat})$	--	--	1.2	V
Collector Capacitance $V_{cb} = 10 \text{ V}, I_e = 0$ $f = 1 \text{ MHz}$	C_{obo}	--	--	8	pF

* Pulse test, pulse width $\leq 300 \mu\text{sec}$, duty cycle $\leq 2\%$