PRODUCT DATA

Micro International, Inc

PART NUMBER

LDTBFW16A and LDTBFW16AT

Micro-LID NPN Transistor

Micro International, Inc.
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Micro-LID Transistors
LDTBFW16A and LDTBFW16AT

Description:

The LDTBFW16A (untinned) and LDTBFW16AT (tinned) are NPN silicon 1.2 GHz wideband transistors in very small, rugged, surface mount, 4-post ceramic packages (Micro International manufactured package p/n 4-075-1). The LDTBFW16A and LDTBFW16AT meet the general specifications of the BFW16A 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 LDTBFW16A and LDTBFW16AT can be provided with special feature options such as additional temperature cycling, screening, and matching Hfe selection.

Maximum Ratings:

Parameter	Symbol	Rating
Collector-Base Voltage	Vcbo	40 V
Collector-Emitter Voltage	Vceo	25 V
Emitter-Base Voltage	Vebo	2 V
Collector Current	Ic	150 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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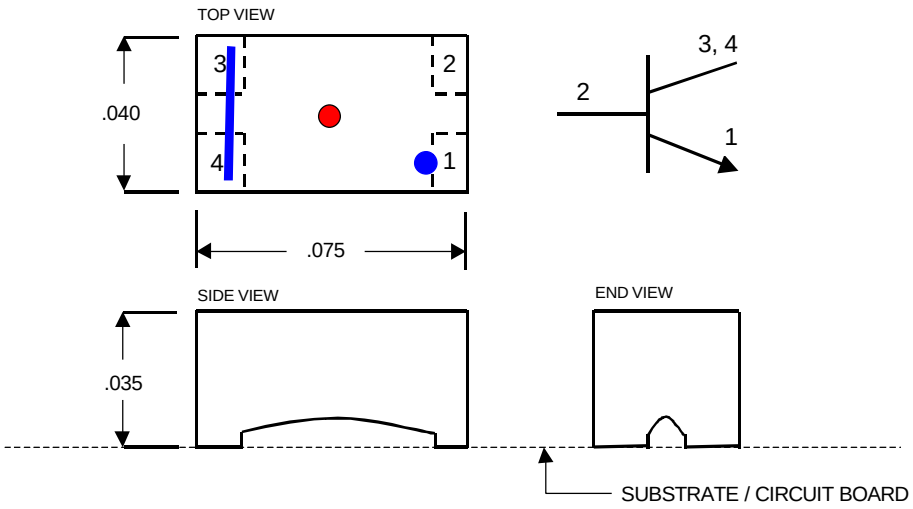
Outline / Schematic:



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 : Blue Stripe over Collector, Blue 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 = 100 uA, Ie = 0	BVcbo	40	--	--	V
Collector-Emitter Breakdown* Ib = 0, Ic = 10 mA	BVceo	25	--	--	V
Emitter-Base Breakdown Ic = 0, Ie = 100 uA	BVebo	2	--	--	V
Collector-Base Cutoff Current Vcb = 20 V	Icbo	--	--	50	nA
DC Forward Current Gain* Ic = 50 mA, Vce = 5 V Ic = 150 mA, Vce = 5 V	Hfe	 25 25	 -- --	 -- --	
Collector-Emitter Saturation Ic = 100 mA, Ib = 10 mA	Vce (sat)	--	--	1	V
Collector Capacitance Vcb = 15 V, Ie = 0 f = 1 MHz	Cobo	--	--	4	pF
Gain Bandwidth Product Ic = 150 mA, Vce = 15 V f = 500 MHz	fT	--	1.2	--	GHz
Noise Figure Ic = 50 mA, Vce = 10 V f = 500 MHz	NF	--	--	3.3	dB

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