PRODUCT DATA

Micro International, Inc

PART NUMBER

LDTBFR90 and LDTBFR90T

Micro-LID NPN Transistor

Micro International, Inc.
179-204 Belle Forrest Circle
Nashville, TN 37221

Tel: 615-662-1200 Fax 615-662-1226

www.microlid.com sales@microlid.com

Micro-LID Transistors
LDTBFR90 and LDTBFR90T

Description:

The LDTBFR90 (untinned) and LDTBFR90T (tinned) are NPN silicon 5 GHz wideband transistors in very small, rugged, surface mount, 4-post ceramic packages (Micro International manufactured package p/n 4-075-1). The LDTBFR90 and LDTBFR90T meet the general specifications of the BFR90 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 LDTBFR90 and LDTBFR90T 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	20 V
Collector-Emitter Voltage	Vceo	15 V
Emitter-Base Voltage	Vebo	2 V
Collector Current	Ic	25 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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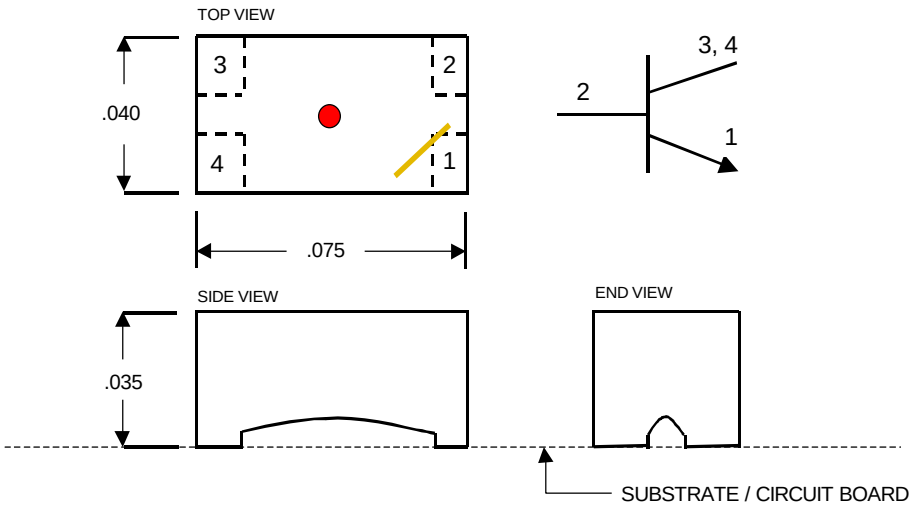
Outline / Schematic:



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 Diagonal 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	20	--	--	V
Collector-Emitter Breakdown* Ib = 0, Ic = 10 mA	BVceo	15	--	--	V
Emitter-Base Breakdown Ic = 0, Ie = 10 uA	BVebo	2	--	--	V
Collector-Base Cutoff Current Vcb = 10 V	Icbo	--	--	50	nA
DC Forward Current Gain* Ic = 14 mA, Vce = 10 V	Hfe	40	--	--	
Collector Capacitance Vcb = 10 V, Ie = 0 f = 1 MHz	Cobo	--	--	1	pF
Gain Bandwidth Product Ic = 14 mA, Vce = 10 V f = 500 MHz	fT	--	5	--	GHz
Noise Figure Ic = 2 mA, Vce = 10 V f = 500 MHz	NF	--	--	2.4	dB

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