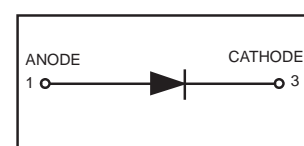


Dual Series Schottky Barrier Diodes

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

- Extremely Fast Switching Speed
- Low Forward Voltage — 0.35 Volts (Typ) @ $I_F = 10$ mAdc
- Pb-Free package is available

LBAT54LT1G



DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBAT54LT1G	JV3	3000/Tape&Reel
LBAT54LT3G	JV3	10000/Tape&Reel

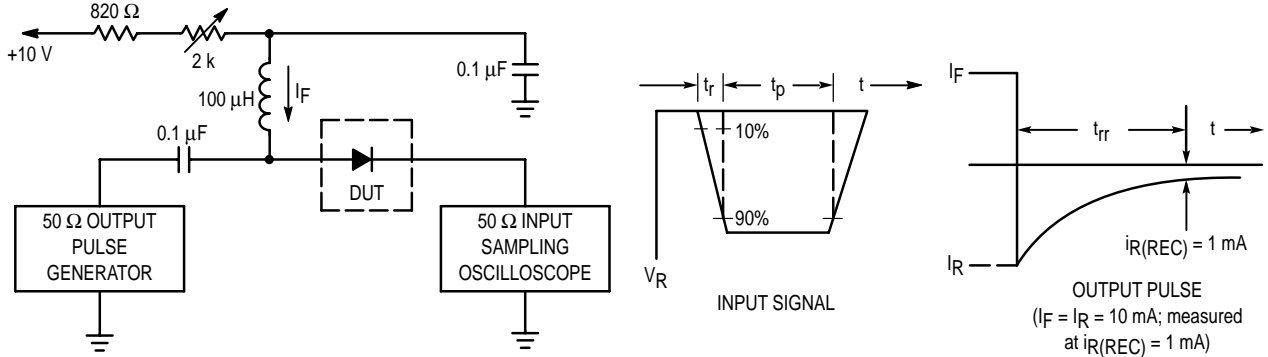
MAXIMUM RATINGS ($T_J = 125^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	30	Volts
Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	225 2.0	mW mW/ $^\circ\text{C}$
Forward Current (DC)	I_F	200 Max	mA
Junction Temperature	T_J	125 Max	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ($I_R = 10 \mu\text{A}$)	$V_{(\text{BR})\text{R}}$	30	—	—	Volts
Total Capacitance ($V_R = 1.0$ V, $f = 1.0$ MHz)	C_T	—	7.6	10	pF
Reverse Leakage ($V_R = 25$ V)	I_R	—	0.5	2.0	μAdc
Forward Voltage ($I_F = 0.1$ mAdc)	V_F	—	0.22	0.24	Vdc
Forward Voltage ($I_F = 30$ mAdc)	V_F	—	0.41	0.5	Vdc
Forward Voltage ($I_F = 100$ mAdc)	V_F	—	0.52	1.0	Vdc
Reverse Recovery Time ($I_F = I_R = 10$ mAdc, $I_{\text{R(REC)}} = 1.0$ mAdc) Figure 1	t_{rr}	—	—	5.0	ns
Forward Voltage ($I_F = 1.0$ mAdc)	V_F	—	0.29	0.32	Vdc
Forward Voltage ($I_F = 10$ mAdc)	V_F	—	0.35	0.40	Vdc
Forward Current (DC)	I_F	—	—	200	mAdc
Repetitive Peak Forward Current	I_{FRM}	—	—	300	mAdc
Non-Repetitive Peak Forward Current ($t < 1.0$ s)	I_{FSM}	—	—	600	mAdc

LBAT54LT1G



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
 2. Input pulse is adjusted so $I_R(\text{peak})$ is equal to 10 mA.
 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

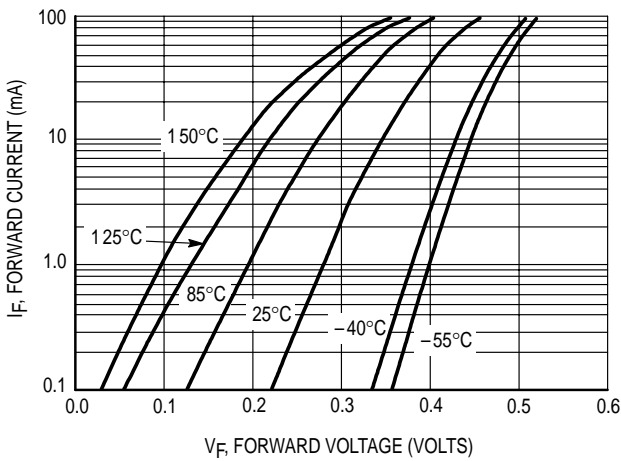


Figure 2. Forward Voltage

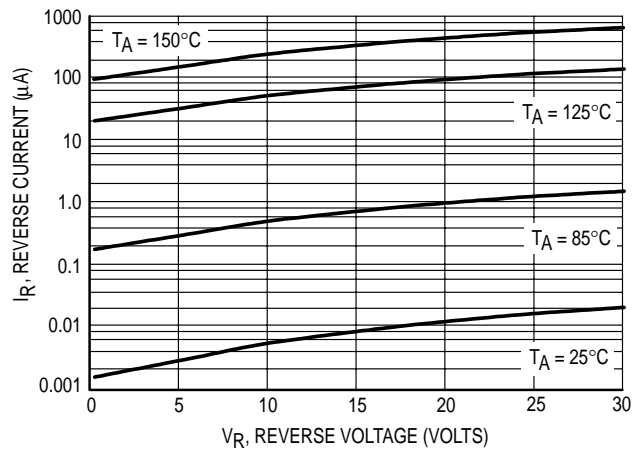


Figure 3. Leakage Current

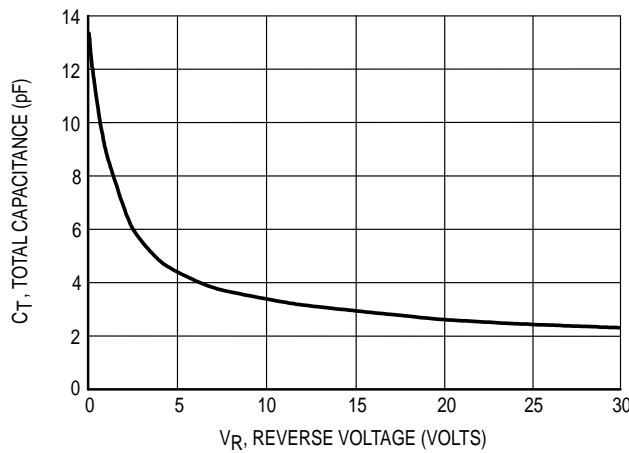
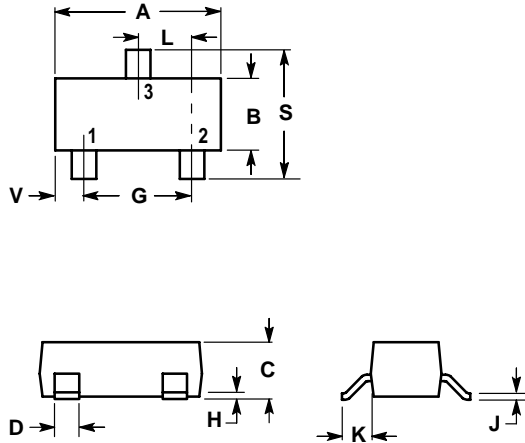


Figure 4. Total Capacitance

LBAT54LT1G

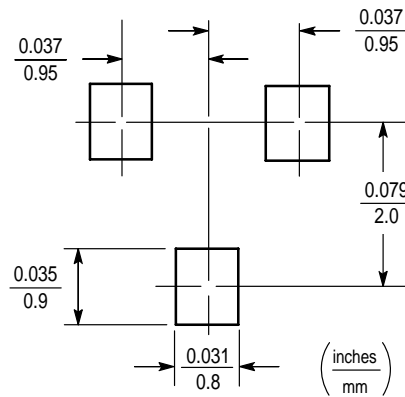
SOT-23



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

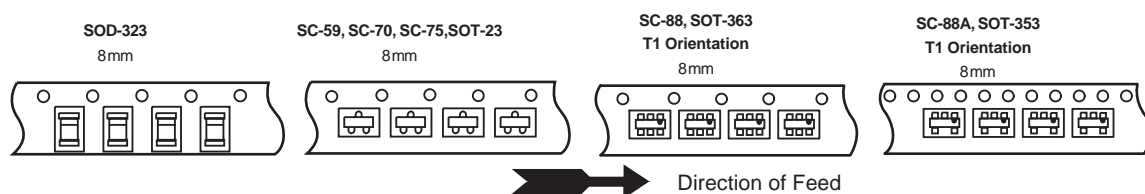


Tape & Reel and Packaging Specifications for Small-Signal Transistors, FETs and Diodes

Embossed Tape and Reel is used to facilitate automatic pick and place equipment feed requirements. The tape is used as the shipping container for various products and requires a minimum of handling. The antistatic/conductive tape provides a secure cavity for the product when sealed with the “peel-back” cover tape.

- Two Reel Sizes Available (7" and 13")
- Used for Automatic Pick and Place Feed Systems
- Minimizes Product Handling
- EIA 481, -1, -2
- SOT-23, SC-70/SOT-323, SC-89, SC-88/SOT-363, SC-88A/SOT-353, SOD-323, SOD-523 in 8 mm Tape

Use the standard device title and add the required suffix as listed in the option table below (Table 1). Note that the individual reels have a finite number of devices depending on the type of product contained in the tape. Also note the minimum lot size is one full reel for each line item, and orders are required to be in increments of the single reel quantity.

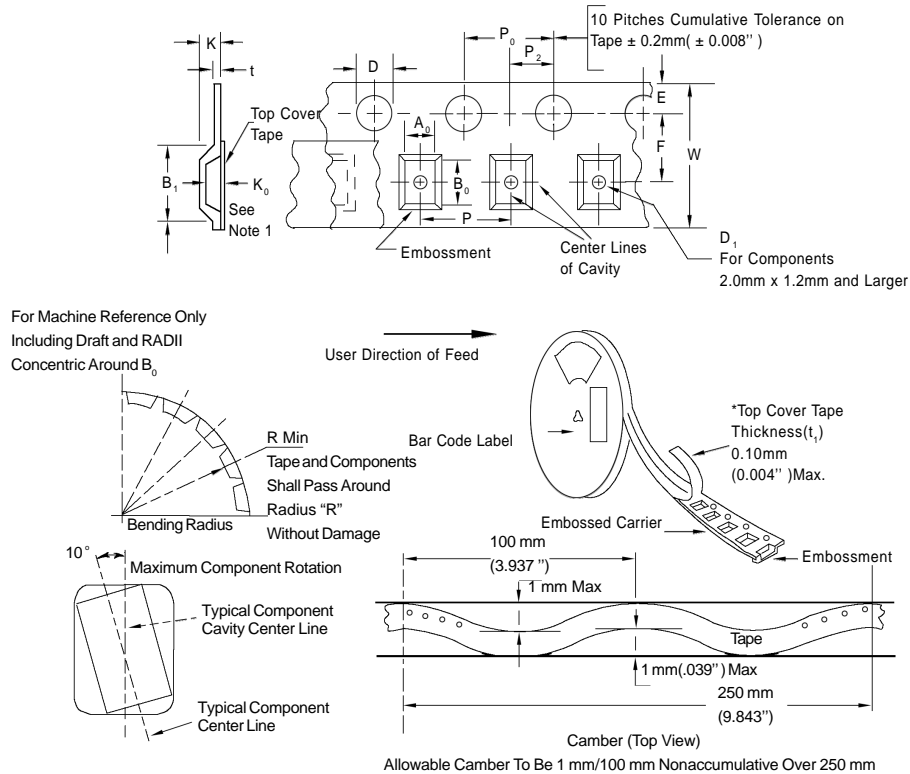


Typical Reel Orientations

Table 1. EMBOSSED TAPE AND REEL ORDERING INFORMATION

Package	Tape Width (mm)	Pitch mm	Reel Size mm(inch)	Devices Per Reel and Minimum Order Quantity	Device Suffix
SOT-23	8	4	178	(7)	3,000 T1
	8		330	(13)	10,000 T3
SC-70/SOT-323	8	4	178	(7)	3,000 T1
	8		330	(13)	10,000 T3
SC-89	8	4	178	(7)	3,000 T1
	8		330	(13)	10,000 T3
SC-88/SOT-363	8	4	178	(7)	3,000 T1
	8		330	(13)	10,000 T3
SC-88A/SOT-353	8	4	178	(7)	3,000 T1
	8		330	(13)	10,000 T3
SOD-323	8	4	178	(7)	3,000 T1
	8		330	(13)	10,000 T3
SOD-523	8	4	178	(7)	3,000 T1
	8		330	(13)	10,000 T3

EMBOSSED TAPE AND REEL DATA FOR DISCRETES CARRIER TAPE SPECIFICATIONS



DIMENSIONS

Tape Size	B_1 Max	D	D_1	E	F	K	P_0	P_2	RMin	TMax	WMax
8mm	4.55mm (.179'')	1.5+0.1mm - 0.0	1.0Min (.039'')	1.75±0.1mm (.069±.004)	3.5±0.05mm (.138±.002'')	2.4mmMax (.094'')	4.0 ± 0.1mm (.157 ± .004'')	2.0 ± 0.1mm (.079 ± .002'')	25mm (.98'')	0.6mm (.024'')	8.3mm (.327'')
12mm	8.2mm (.323'')	(.059+.004" -0.0)	1.5mmMin (.060'')		5.5±0.05mm (.217±.002'')	6.4mmMax (.252'')			30mm (1.18'')		12 ± .30mm (.470 ± .012'')
16mm	12.1mm (.476'')				7.5±0.10mm (.295±.004'')	7.9mmMax (.311'')					16.3mm (.642'')
24mm	20.1mm (.791'')				11.5±0.1mm (.453±.004'')	11.9mmMax (.468'')					24.3mm (.957'')

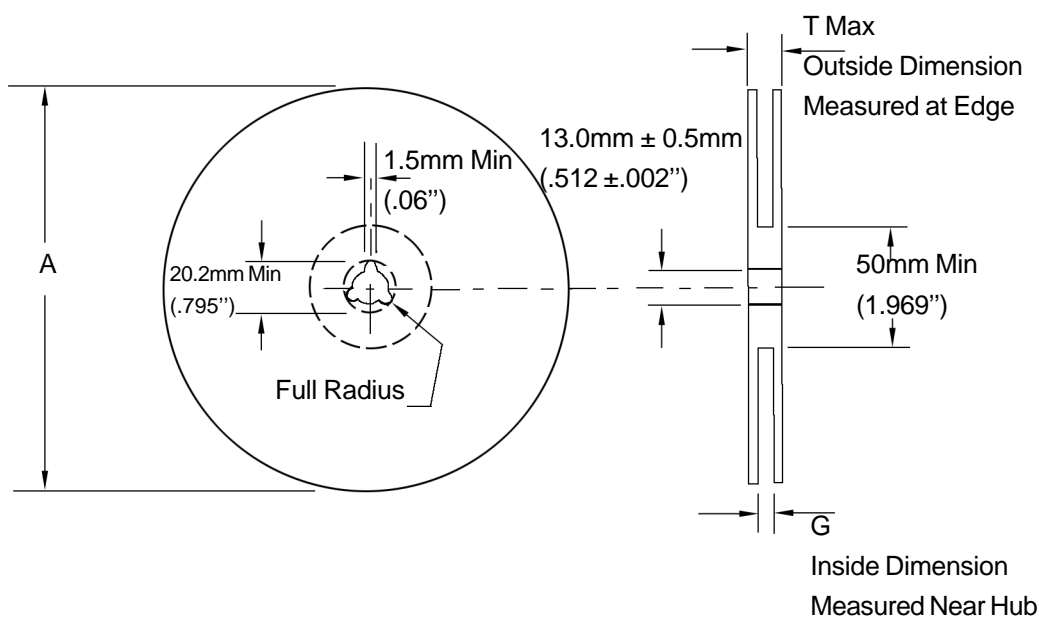
Metric dimensions govern - English are in parentheses for reference only.

NOTE 1: A_0 , B_0 , and K_0 are determined by component size. The clearance between the components and the cavity must be within .05 mm min. to .50 mm max.,

NOTE 2: the component cannot rotate more than 10° within the determined cavity.

NOTE 3: If B_1 exceeds 4.2 mm (.165'') for 8 mm embossed tape, the tape may not feed through all tape feeders.

EMBOSSED TAPE AND REEL DATA FOR DISCRETES



Size	A Max	G	T Max
8 mm	330mm (12.992")	8.4mm+1.5mm, -0.0 (.33"+.059", -0.00)	14.4mm (.56")
12mm	330mm (12.992")	12.4mm+2.0mm, -0.0 (.49 "+ .079", -0.00)	18.4mm (.72")
16mm	360mm (14.173")	16.4mm+2.0mm, -0.0 (.646"+.078", -0.00)	22.4mm (.882")
24 mm	360mm (14.173")	24.4mm+2.0mm, -0.0 (.961"+.070", -0.00)	30.4mm (1.197")

Reel Dimensions

Metric Dimensions Govern — English are in parentheses for reference only

Storage Conditions

Temperature: 5 to 40 Deg.C (20 to 30 Deg. C is preferred)

Humidity: 30 to 80 RH (40 to 60 is preferred)

Recommended Period: One year after manufacturing

(This recommended period is for the soldering condition only. The characteristics and reliabilities of the products are not restricted to this limitation)