

# Driver Transistors

## PNP Silicon

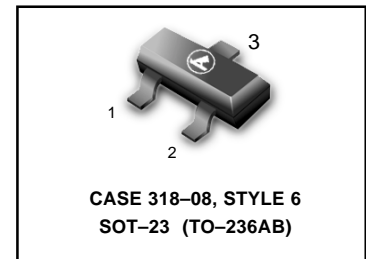
We declare that the material of product compliance with RoHS requirements.

S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

**LMBTA55LT1G**  
**LMBTA56LT1G**  
**S-LMBTA55LT1G**  
**S-LMBTA56LT1G**

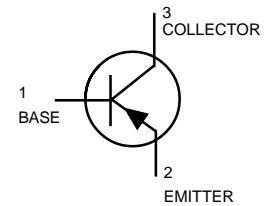
### MAXIMUM RATINGS

Rating	Symbol	Value		Unit
		LMBTA55	LMBTA56	
Collector–Emitter Voltage	$V_{CE0}$	-60	-80	Vdc
Collector–Base Voltage	$V_{CB0}$	-60	-80	Vdc
Emitter–Base Voltage	$V_{EB0}$	-4.0		Vdc
Collector Current — Continuous	$I_C$	-500		mAdc



### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1) $T_A = 25^\circ\text{C}$	$P_D$	225	mW
Derate above $25^\circ\text{C}$		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$	$P_D$	300	mW
Derate above $25^\circ\text{C}$		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	$T_J, T_{stg}$	-55 to +150	$^\circ\text{C}$



### DEVICE MARKING

(S-)LMBTA55LT1G = 2H; (S-)LMBTA56LT1G = 2GM

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

Characteristic	Symbol	Min	Max	Unit
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### OFF CHARACTERISTICS

Collector–Emitter Breakdown Voltage (3) ( $I_C = -1.0 \text{ mAdc}, I_B = 0$ )	$V_{(BR)CE0}$			Vdc
	LMBTA55	-60	—	
	LMBTA56	-80	—	
Emitter–Base Breakdown Voltage ( $I_E = -100 \mu\text{Adc}, I_C = 0$ )	$V_{(BR)EB0}$	-4.0	—	Vdc
Collector Cutoff Current ( $V_{CE} = -60\text{Vdc}, I_B = 0$ )	$I_{CES}$	—	-0.1	$\mu\text{Adc}$
Collector Cutoff Current ( $V_{CB} = -60\text{Vdc}, I_E = 0$ )	$I_{CBO}$	—	-0.1	$\mu\text{Adc}$
	LMBTA55	—	-0.1	
	LMBTA56	—	-0.1	

1. FR-5 = 1.0 x 0.75 x 0.062 in.
2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.
3. Pulse Test: Pulse Width  $\leq 300 \mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .

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S-LMBTA55LT1G S-LMBTA56LT1G**

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

Characteristic	Symbol	Min	Max	Unit
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**ON CHARACTERISTICS**

DC Current Gain ( $I_C = -10\text{ mAdc}$ , $V_{CE} = -1.0\text{ Vdc}$ ) ( $I_C = -100\text{ mAdc}$ , $V_{CE} = -1.0\text{ Vdc}$ )	$h_{FE}$	100	—	—
Collector–Emitter Saturation Voltage ( $I_C = -100\text{ mAdc}$ , $I_B = -10\text{ mAdc}$ )	$V_{CE(sat)}$	—	-0.25	Vdc
Base–Emitter On Voltage ( $I_C = -100\text{ mAdc}$ , $V_{CE} = -1.0\text{ Vdc}$ )	$V_{BE(on)}$	—	-1.2	Vdc

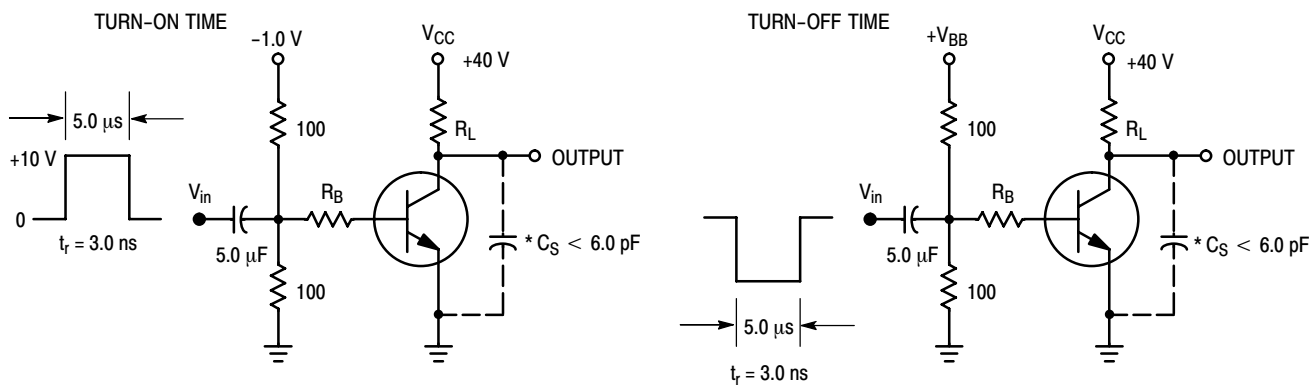
**SMALL-SIGNAL CHARACTERISTICS**

Current –Gain–Bandwidth Product(4) ( $V_{CE} = -1.0\text{ Vdc}$ , $I_C = -100\text{ mAdc}$ , $f = 100\text{ MHz}$ )	$f_T$	50	—	MHz
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4.  $f_T$  is defined as the frequency at which  $|h_{fe}|$  extrapolates to unity.

**ORDERING INFORMATION**

Device	Marking	Shipping
(S-)LMBTA55LT1G	2H	3000/Tape & Reel
(S-)LMBTA56LT1G	2GM	3000/Tape & Reel
(S-)LMBTA55LT3G	2H	10000/Tape & Reel
(S-)LMBTA56LT3G	2GM	10000/Tape & Reel



\*Total Shunt Capacitance of Test Jig and Connectors For PNP Test Circuits, Reverse All Voltage Polarities

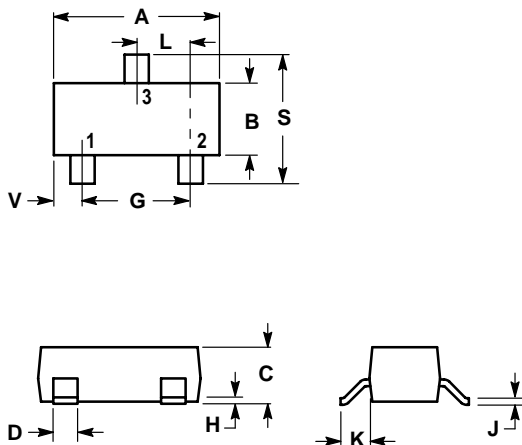
**Figure 1. Switching Time Test Circuits**

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S-LMBTA55LT1G S-LMBTA56LT1G**

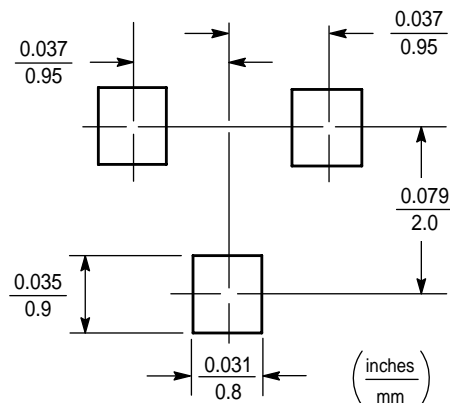
**SOT-23**

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



单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)