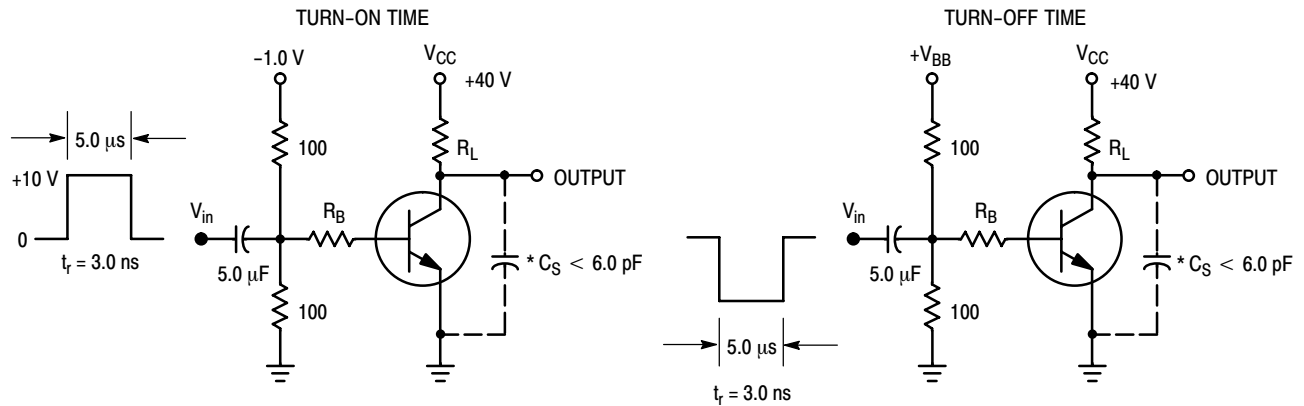


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ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (Note 3) ($I_C = 1.0\text{ mA}$, $I_B = 0$)	$V_{(BR)CEO}$	60 80	— —	Vdc
Emitter-Base Breakdown Voltage ($I_E = 100\text{ }\mu\text{A}$, $I_C = 0$)	$V_{(BR)EBO}$	4.0	—	Vdc
Collector Cutoff Current ($V_{CE} = 60\text{ Vdc}$, $I_B = 0$)	I_{CES}	—	0.1	μA
Collector Cutoff Current ($V_{CB} = 60\text{ Vdc}$, $I_E = 0$) ($V_{CB} = 80\text{ Vdc}$, $I_E = 0$)	I_{CBO}	— —	0.1 0.1	μA
ON CHARACTERISTICS				
DC Current Gain ($I_C = 10\text{ mA}$, $V_{CE} = 1.0\text{ Vdc}$) ($I_C = 100\text{ mA}$, $V_{CE} = 1.0\text{ Vdc}$)	h_{FE}	100 100	— —	—
Collector-Emitter Saturation Voltage ($I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$)	$V_{CE(sat)}$	—	0.25	Vdc
Base-Emitter On Voltage ($I_C = 100\text{ mA}$, $V_{CE} = 1.0\text{ Vdc}$)	$V_{BE(on)}$	—	1.2	Vdc
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain - Bandwidth Product (Note 4) ($I_C = 10\text{ mA}$, $V_{CE} = 2.0\text{ V}$, $f = 100\text{ MHz}$)	f_T	100	—	MHz

3. Pulse Test: Pulse Width $\leq 300\text{ }\mu\text{s}$, Duty Cycle $\leq 2.0\%$.
4. f_T is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.



*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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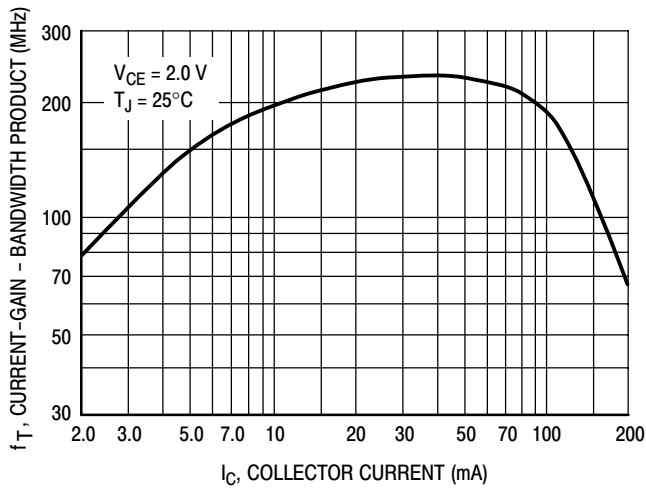


Figure 2. Current-Gain — Bandwidth Product

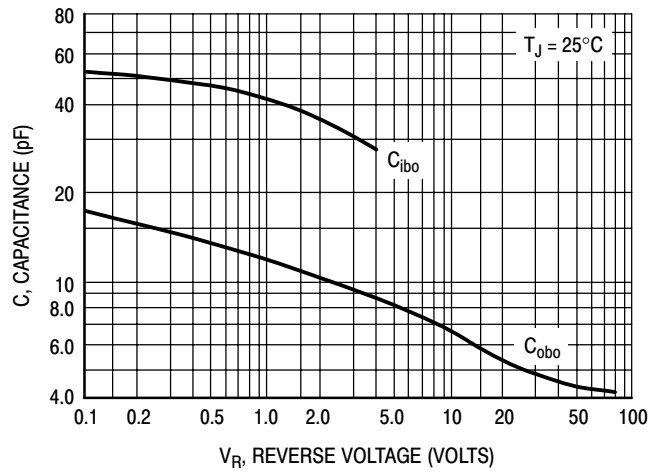


Figure 3. Capacitance

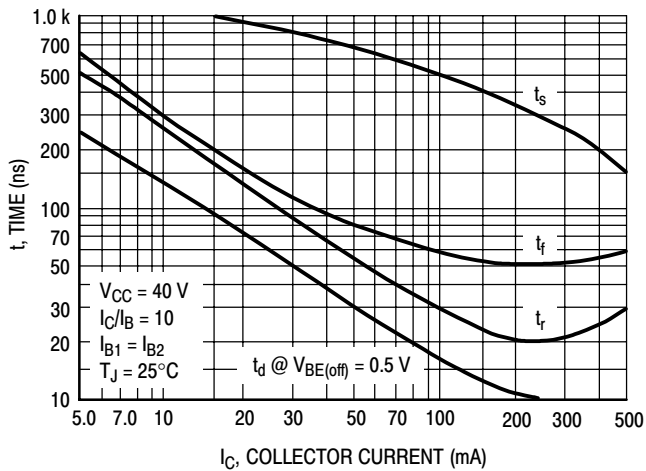


Figure 4. Switching Time

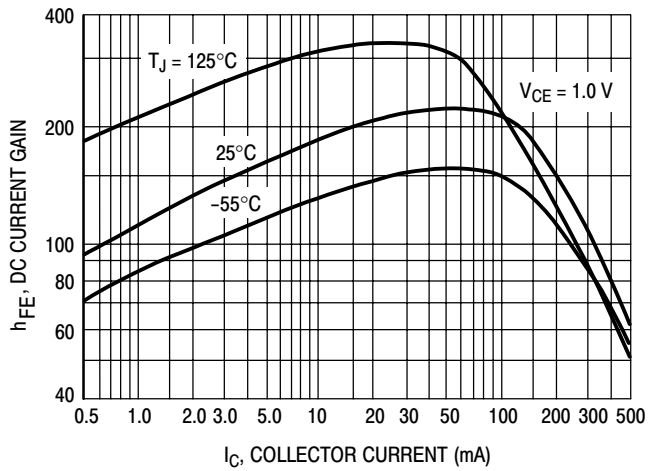


Figure 5. DC Current Gain

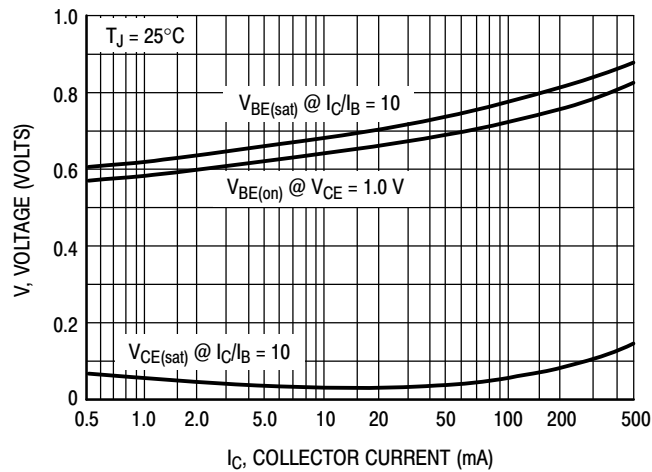


Figure 6. "ON" Voltages

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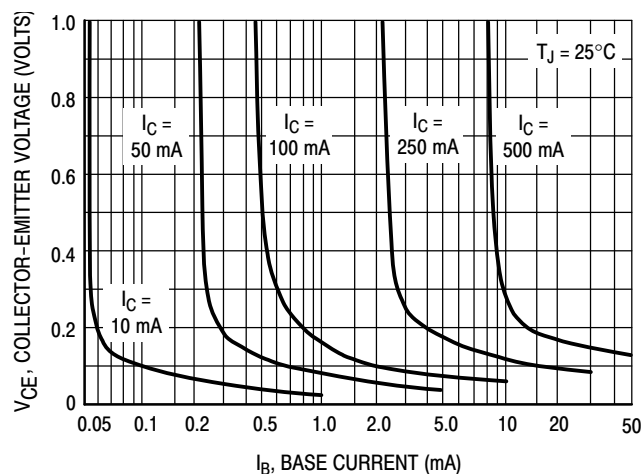


Figure 7. Collector Saturation Region

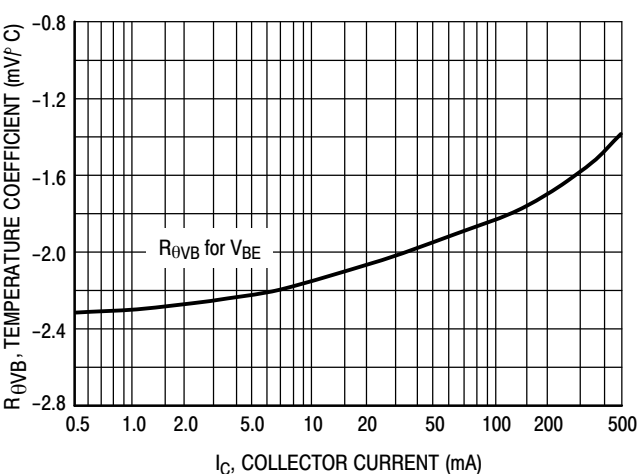


Figure 8. Base-Emitter Temperature Coefficient

ORDERING INFORMATION

Device	Package	Shipping [†]
MMBTA05LT1	SOT-23	3000 / Tape & Reel
MMBTA05LT1G	SOT-23 (Pb-Free)	3000 / Tape & Reel
MMBTA05LT3	SOT-23	10,000 / Tape & Reel
MMBTA05LT3G	SOT-23 (Pb-Free)	10,000 / Tape & Reel
MMBTA06LT1	SOT-23	3000 / Tape & Reel
MMBTA06LT1G	SOT-23 (Pb-Free)	3000 / Tape & Reel
MMBTA06LT3	SOT-23	10,000 / Tape & Reel
MMBTA06LT3G	SOT-23 (Pb-Free)	10,000 / Tape & Reel

[†]For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

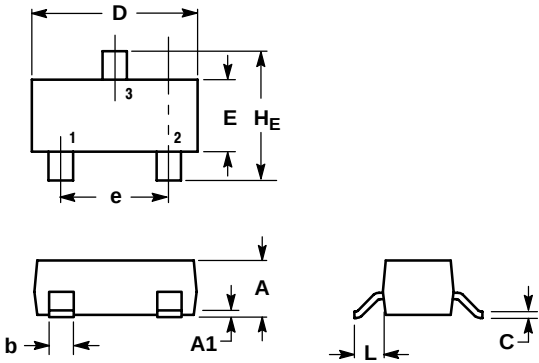
MMBTA05LT1, MMBTA06LT1

PACKAGE DIMENSIONS

SOT-23 (TO-236)

CASE 318-08

ISSUE AL



NOTES:

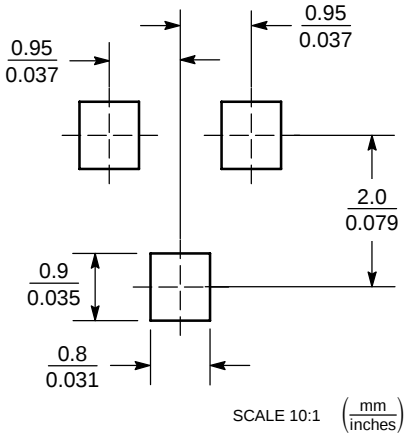
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. 318-01 THRU -07 AND -09 OBSOLETE, NEW STANDARD 318-08.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
H _E	2.10	2.40	2.64	0.083	0.094	0.104

STYLE 6:

- PIN 1. BASE
2. EMITTER
3. COLLECTOR

SOLDERING FOOTPRINT*



*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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