



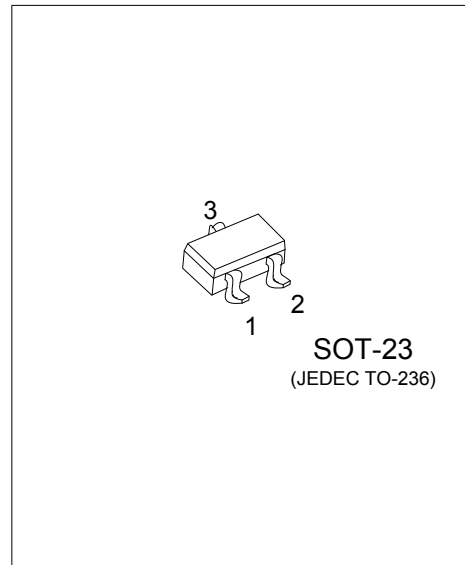
MMBTA56

PNP SILICON TRANSISTOR

AMPLIFIER TRANSISTOR

FEATURES

- * Collector-Emitter Voltage: $V_{CE0} = -80V$
- * Collector Dissipation: $P_D = 350mW$



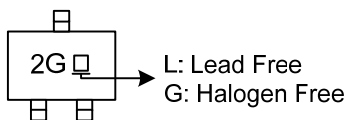
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MMBTA56L-AE3-R	MMBTA56G-AE3-R	SOT-23	B	E	C	Tape Reel

Note: Pin Assignment: B: Base E: Emitter C: Collector

<p>MMBTA56G-AE3-R</p>	<p>(1) Packing Type (1) R: Tape Reel</p> <p>(2) Package Type (2) AE3: SOT-23</p> <p>(3) Green Package (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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MARKING



MMBTA56

PNP SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V _{CBO}	-80	V
Collector-Emitter Voltage	V _{CEO}	-80	V
Emitter-Base Voltage	V _{EBO}	-4	V
Collector Current - Continuous	I _C	-500	mA
Total Device Dissipation (Note 2)	P _D	350	mW
Derate Above 25°C		2.8	mW/°C
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. Device mounted on FR-4=1.6×1.6×0.06 in.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Thermal Resistance, Junction to Ambient	θ _{JA}	357	°C/W

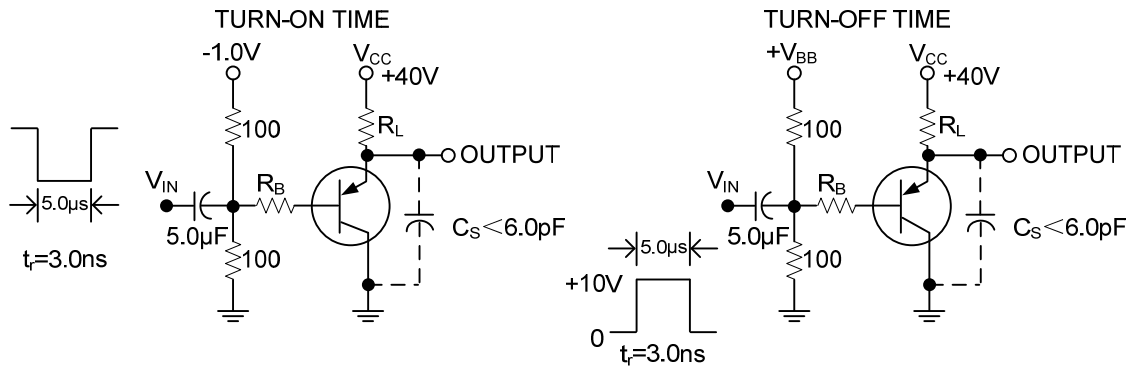
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Emitter Breakdown Voltage (Note 1)	BV _{CEO}	I _C = -1.0mA, I _B =0	-80			V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E = -100μA, I _C =0	-4			V
Collector Cutoff Current	I _{CES}	V _{CE} = -60V, I _B =0			-0.1	μA
Collector Cutoff Current	I _{CBO}	V _{CB} = -80V, I _E =0			-0.1	μA
ON CHARACTERISTICS						
DC Current Gain	h _{FE}	I _C = -10mA, V _{CE} = -1V I _C = -100mA, V _{CE} = -1V	100 100			
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	I _C = -100mA, I _B = -10mA			-0.25	V
Base-Emitter on Voltage	V _{BE(ON)}	I _C = -100mA, V _{CE} = -1V			-1.2	V
SMALL-SIGNAL CHARACTERISTICS						
Current Gain Bandwidth Product (Note2)	f _T	I _C = -10mA, V _{CE} = -2V, f=100MHz	100			MHz

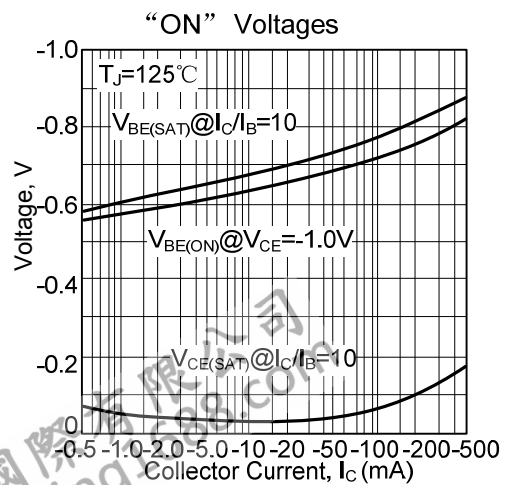
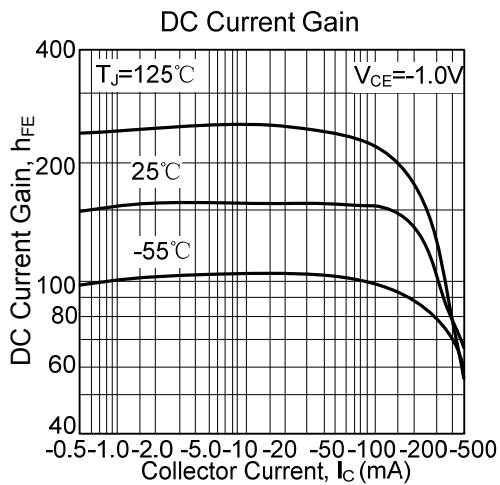
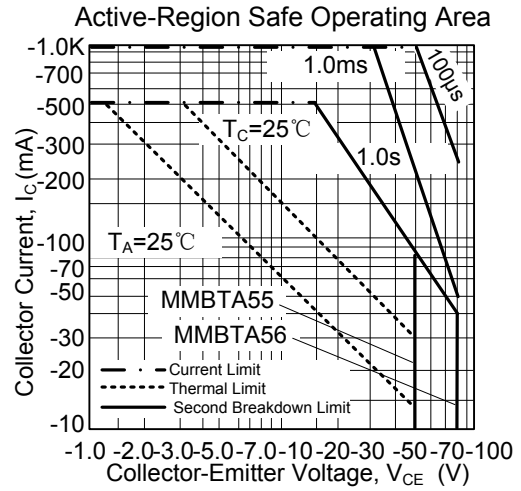
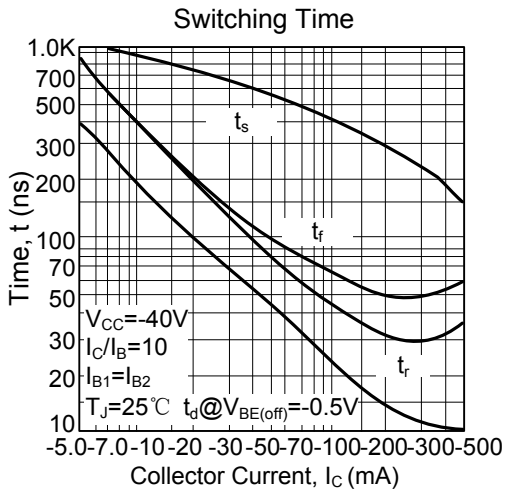
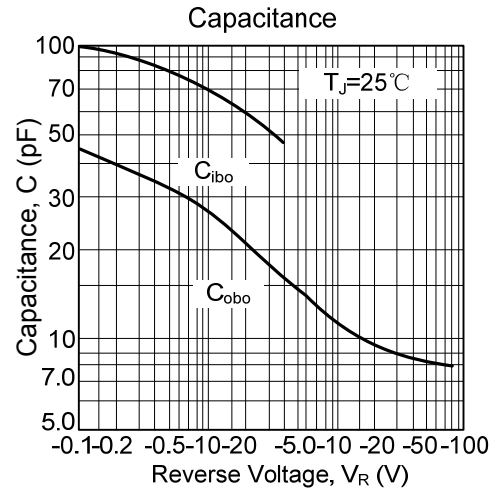
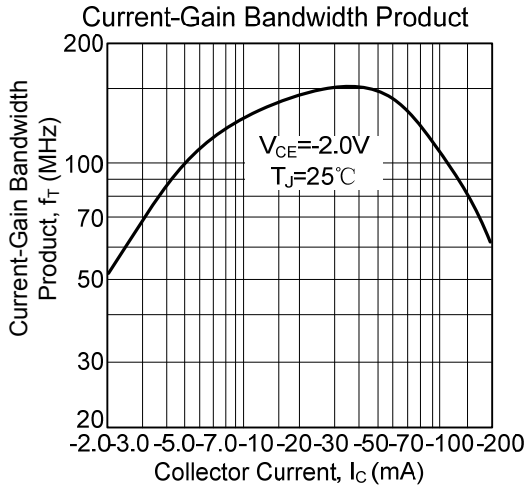
Notes: 1: Pulse test: PW≤300μs, Duty Cycle≤2%.

2: f_T is defined as the frequency at which I_{hfe} extrapolates to unity.

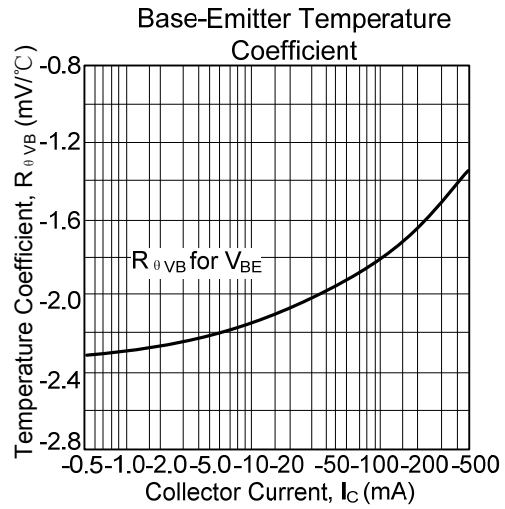
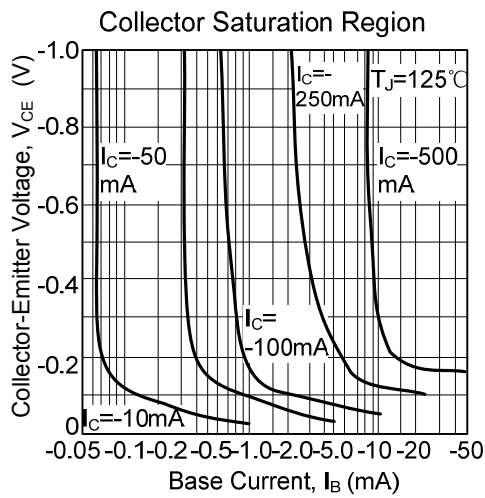
SWITCHING TIME TEST CIRCUITS



TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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