



MMBTA94

PNP SILICON TRANSISTOR

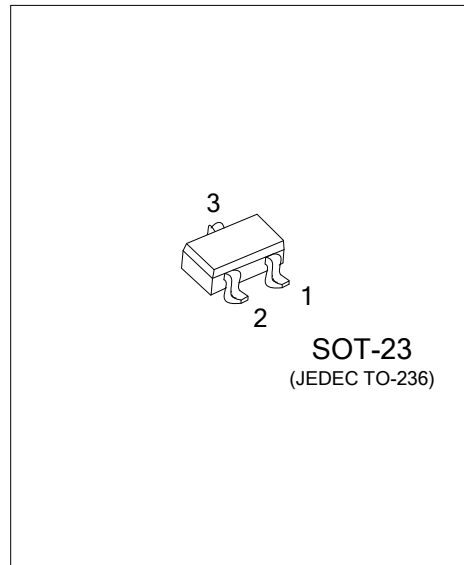
HIGH VOLTAGE TRANSISTOR

FEATURES

- * Collector-Emitter Voltage: $V_{CE0} = -400V$
- * Collector Dissipation: $P_{C(MAX)} = 350mW$
- * Low Collector-Emitter Saturation Voltage

APPLICATIONS

- * Telephone Switching
- * High Voltage Switch



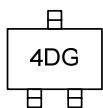
ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
MMBTA94G-AE3-R	SOT-23	E	B	C	Tape Reel

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

<p>MMBTA94G-AE3-R</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23</p> <p>(3) G: Halogen Free and Lead Free</p>
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MARKING



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PNP SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	-400	V
Collector-Emitter Voltage	V_{CEO}	-400	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-300	mA
Collector Dissipation ($T_a=25^\circ\text{C}$)	P_C	350	mW
Junction Temperature	T_J	+150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40~+150	$^\circ\text{C}$

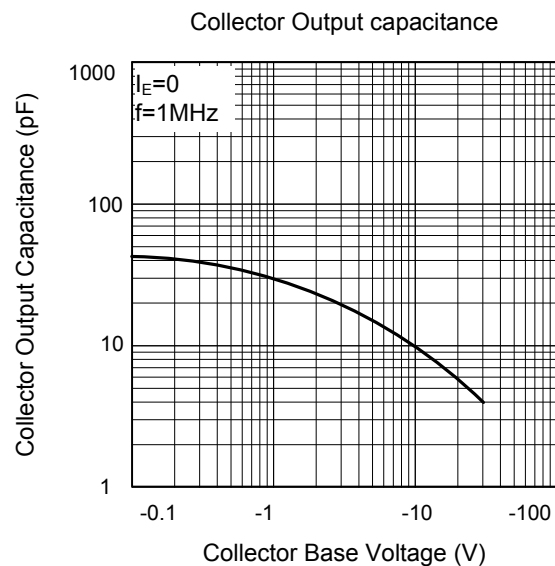
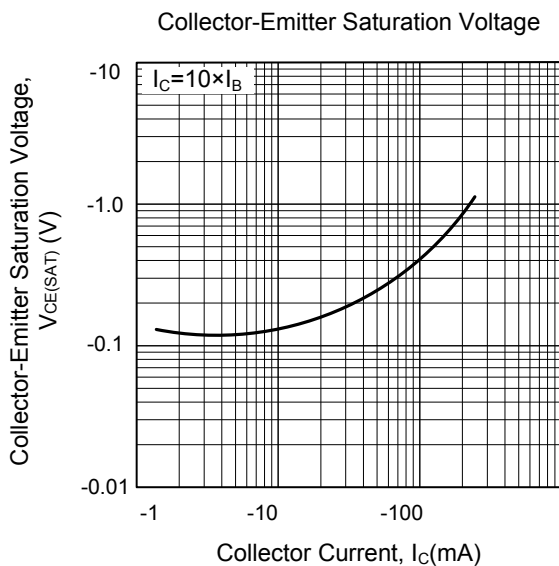
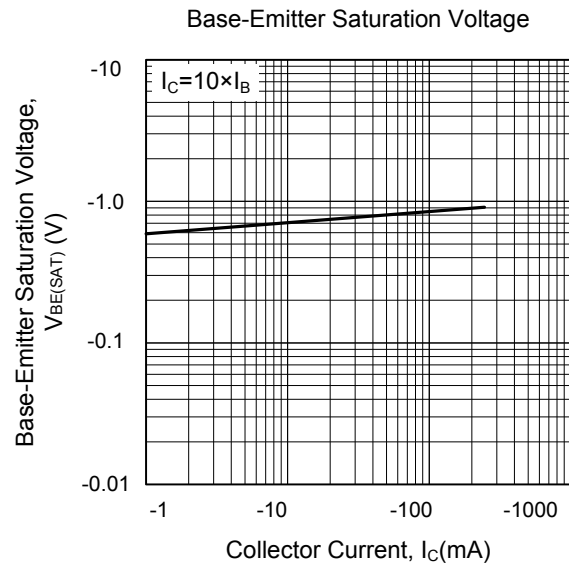
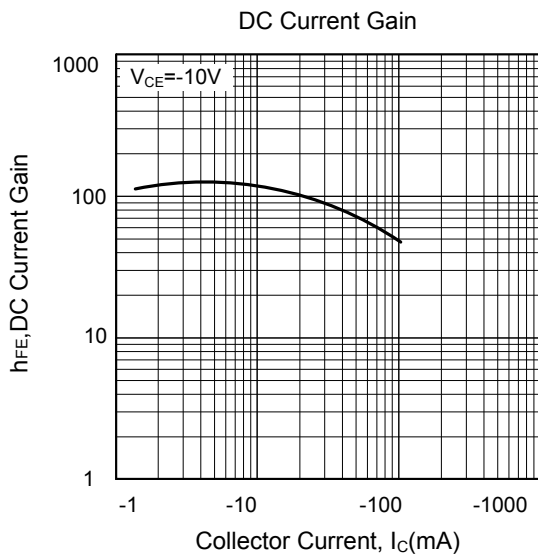
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = -100\mu\text{A}, I_E=0$	-400			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = -1\text{mA}, I_B=0$	-400			V
Collector-Emitter Breakdown Voltage	BV_{CES}	$I_C = -100\mu\text{A}, V_{BE}=0$	-400			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -100\mu\text{A}, I_C=0$	-5			V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -300\text{V}, I_E=0$			-100	nA
Collector Cut-off Current	I_{CES}	$V_{CB} = -400\text{V}, V_{BE}=0$			-1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -4\text{V}, I_C=0$			100	nA
DC Current Gain (Note)	h_{FE}	$V_{CE} = -10\text{V}, I_C = -1\text{mA}$	60			
		$V_{CE} = -10\text{V}, I_C = -10\text{mA}$	70		300	
		$V_{CE} = -10\text{V}, I_C = -50\text{mA}$	70			
		$V_{CE} = -10\text{V}, I_C = -100\text{mA}$	40			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$			-0.20	V
		$I_C = -50\text{mA}, I_B = -5\text{mA}$			-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$			-0.75	V
Output Capacitance	C_{ob}	$V_{CB} = -20\text{V}, I_E=0, f = 1\text{MHz}$			7	pF

Note: Pulse test: $PW < 300\mu\text{s}$, Duty Cycle $< 2\%$

■ TYPICAL CHARACTERISTICS



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