



MMBTA94

PNP SILICON TRANSISTOR

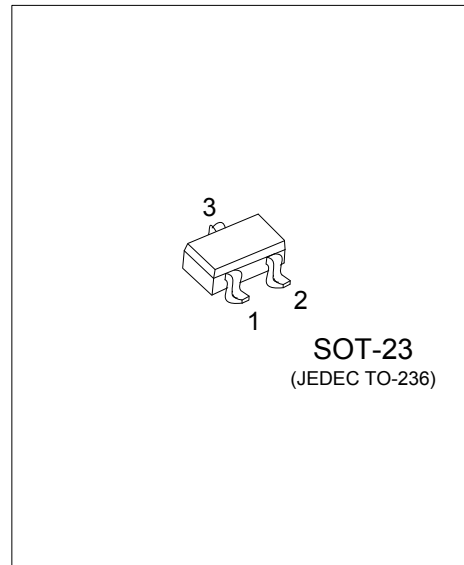
HIGH VOLTAGE TRANSISTOR

FEATURES

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

APPLICATIONS

- * Telephone Switching
- * High Voltage Switch



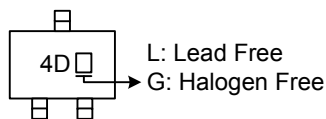
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MMBTA94L-AE3-R	MMBTA94G-AE3-R	SOT-23	B	E	C	Tape Reel

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

MMBTA94G-AE3-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AE3: SOT-23
	(3)Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING



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■ 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	DC	I_C	-300	mA
	Pulse	I_{CP}	-800	mA
Collector Current	Pulsed	I_{CM}	-800	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	$^\circ\text{C}$	

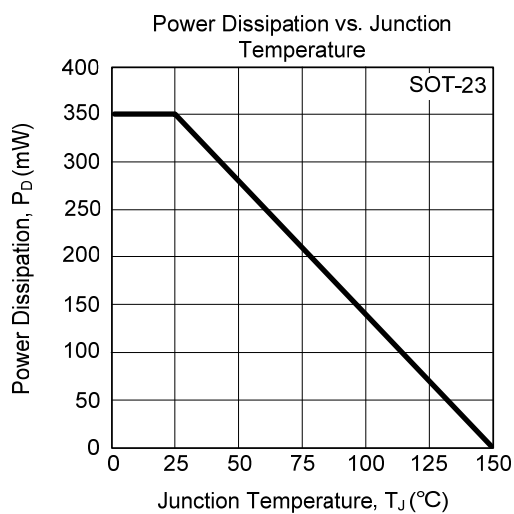
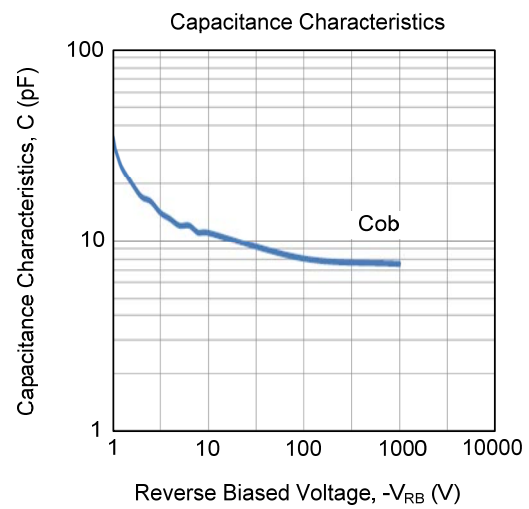
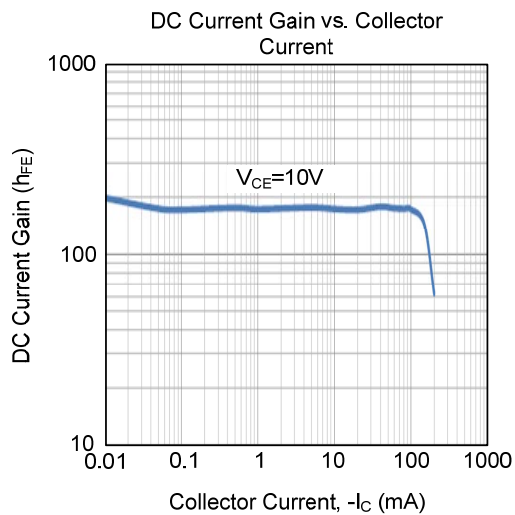
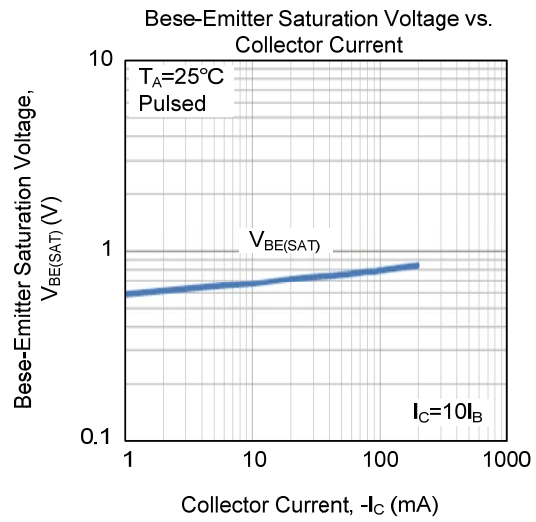
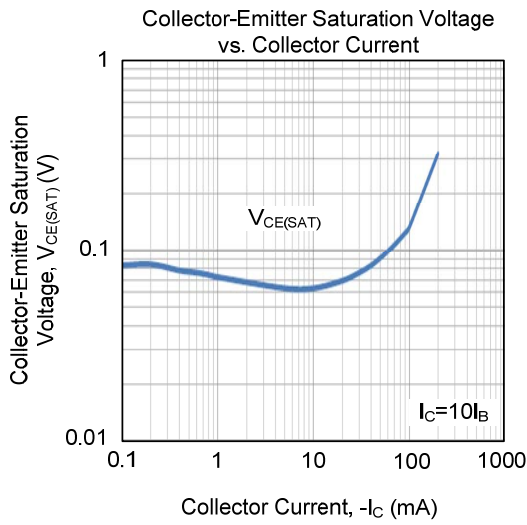
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = -100\mu\text{A}, I_E=0$	-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: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

TYPICAL CHARACTERISTICS



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