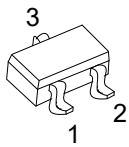
MMBTA194

PNP SILICON TRANSISTOR

HIGH VOLTAGE TRANSISTOR



SOT-23
(JEDEC TO-236)

■ FEATURES

* Collector-Emitter Voltage: V_{CEO} = -500V
* Collector Dissipation: $P_{C(MAX)}$ = 300mW
* Low Collector-Emitter Saturation Voltage

■ APPLICATIONS

* Telephone Switching
* High Voltage Switch

■ ORDERING INFORMATION

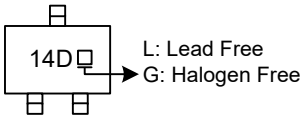
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MMBTA194L-AE3-R	MMBTA194G-AE3-R	SOT-23	B	E	C	Tape Reel

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

MMBTA194G-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



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

PARAMETER		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-500	V
Collector-Emitter Voltage		V_{CEO}	-500	V
Emitter-Base Voltage		V_{EBO}	-6	V
Collector Current	DC	I_C	-300	mA
Collector Dissipation (T_A=25°C)		P_C	350	mW
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-40 ~ +150	°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.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	357	°C/W

Note：Device mounted on FR-4 substrate PC board, 2oz copper, with 1inch square copper plate.

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	I_C = -100μA, I_E=0	-500			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C = -1mA, I_B=0	-500			V
Collector-Emitter Breakdown Voltage	BV_{CES}	I_C = -100μA,V_{BE}=0	-500			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E= -100μA, I_C=0	-6			V
Collector Cut-off Current	I_{CBO}	V_{CB}= -500V, I_E=0			-100	nA
Collector Cut-off Current	I_{CES}	V_{CB}= -500V, V_{BE}=0			-1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}= -4V, I_C=0			100	nA
DC Current Gain (Note)	h_{FE}	V_{CE}= -10V, I_C= -1mA	60			
		V_{CE}= -10V, I_C= -10mA	70			
		V_{CE}= -10V, I_C= -50mA	70			
		V_{CE}= -10V, I_C= -100mA	40			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C= -10mA, I_B= -1mA			-0.2	V
		I_C= -50mA, I_B= -5mA			-0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C= -10mA, I_B= -1mA			-0.75	V

Note: Pulse test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.

■ TYPICAL CHARACTERISTICS