

MMBTA93**PNP EPITAXIAL SILICON TRANSISTOR****HIGH VOLTAGE TRANSISTOR****ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	-200	V
Collector-Emitter Voltage	V_{CE0}	-200	V
Emitter-Base Voltage	V_{EB0}	-5	V
Collector Current	I_C	-500	mA
Collector Dissipation	P_C	350	mW
Storage Temperature	T_{stg}	150	$^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{th(j-a)}$	357	$^\circ\text{C/W}$

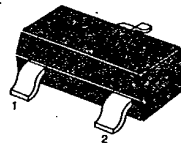
• Refer to MPSA92/93 for graphs

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CB0}	$I_C = -100\mu\text{A}, I_E = 0$	-200		V
* Collector-Emitter Breakdown Voltage	BV_{CE0}	$I_C = -1\text{mA}, I_B = 0$	-200		V
Emitter-Base Breakdown Voltage	BV_{EB0}	$I_E = -100\mu\text{A}, I_C = 0$	-5		V
Collector Cutoff Current	I_{CB0}	$V_{CB} = -160\text{V}, I_E = 0$		-0.25	μA
Emitter Cutoff Current	I_{EB0}	$V_{BE} = -3\text{V}, I_C = 0$		-0.1	μA
* DC Current Gain	h_{FE}	$V_{CE} = -10\text{V}, I_C = -1\text{mA}$	25		
		$V_{CE} = -10\text{V}, I_C = -10\text{mA}$	40		
		$V_{CE} = -10\text{V}, I_C = -30\text{mA}$	25		
* Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -20\text{mA}, I_B = -2\text{mA}$		-0.5	V
* Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -20\text{mA}, I_B = -2\text{mA}$		-0.9	V
Current Gain-Bandwidth Product	f_T	$V_{CE} = -20\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$	50		MHz
Collector-Base Capacitance	C_{cb}	$V_{CB} = -20\text{V}, I_E = 0, f = 1\text{MHz}$		8	pF

* Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycles $\leq 2\%$

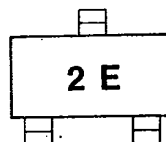
SOT-23



1. Base 2. Emitter 3. Collector

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Marking



SAMSUNG SEMICONDUCTOR