

**MMBTA93**

**PNP EPITAXIAL SILICON TRANSISTOR**

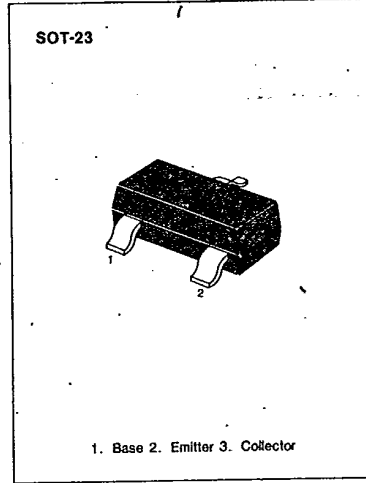
T-29-19

**HIGH VOLTAGE TRANSISTOR**

**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub> = 25°C)**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	-200	V
Collector-Emitter Voltage	V <sub>CE0</sub>	-200	V
Emitter-Base Voltage	V <sub>EB0</sub>	-5	V
Collector Current	I <sub>C</sub>	-500	mA
Collector Dissipation	P <sub>C</sub>	350	mW
Storage Temperature	T <sub>stg</sub>	150	°C
Thermal Resistance Junction to Ambient	R <sub>th(j-a)</sub>	357	°C/W

• Refer to MPSA92/93 for graphs



**ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25°C)**

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	BV <sub>CB0</sub>	I <sub>C</sub> = -100μA, I <sub>E</sub> = 0	-200		V
* Collector-Emitter Breakdown Voltage	BV <sub>CE0</sub>	I <sub>C</sub> = -1mA, I <sub>B</sub> = 0	-200		V
Emitter-Base Breakdown Voltage	BV <sub>EB0</sub>	I <sub>E</sub> = -100μA, I <sub>C</sub> = 0	-5		V
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = -160V, I <sub>E</sub> = 0		-0.25	μA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>BE</sub> = -3V, I <sub>C</sub> = 0		-0.1	μA
* DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -1mA	25		
		V <sub>CE</sub> = -10V, I <sub>C</sub> = -10mA	40		
		V <sub>CE</sub> = -10V, I <sub>C</sub> = -30mA	25		
* Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -20mA, I <sub>B</sub> = -2mA		-0.5	V
* Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -20mA, I <sub>B</sub> = -2mA		-0.9	V
Current Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = -20V, I <sub>C</sub> = -10mA, f = 100MHz	50		MHz
Collector-Base Capacitance	C <sub>cb</sub>	V <sub>CB</sub> = -20V, I <sub>E</sub> = 0, f = 1MHz		8	pF

\* Pulse Test: PW ≤ 300μs, Duty Cycle ≤ 2%

Marking

