

MMBTA43

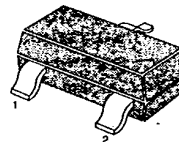
NPN EPITAXIAL SILICON TRANSISTOR

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}	6	V
Collector Current	I_C	500	mA
Collector Dissipation	P_C	350	mW
Storage Temperature	T_{stg}	150	$^\circ\text{C}$

SOT-23



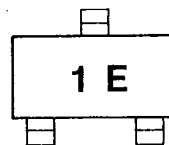
1. Base 2. Emitter 3. Collector

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

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = 100\mu\text{A}, I_E = 0$	200		V
*Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = 1\text{mA}, I_B = 0$	200		V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = 100\mu\text{A}, I_C = 0$	6		V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 160\text{V}, I_E = 0$		100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$		100	nA
*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		
		$V_{CE} = 10\text{V}, I_C = 30\text{mA}$	40		
*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	$I_C = 10\text{mA}, V_{CE} = 20\text{V}$ $f = 100\text{MHz}$	50		MHz
Collector-Base Capacitance	C_{cb}	$V_{CB} = 20\text{V}, I_E = 0$ $f = 1\text{MHz}$		4	pF

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

Marking



MMBT43

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T-29-19

