

NPN EPITAXIAL SILICON TRANSISTOR

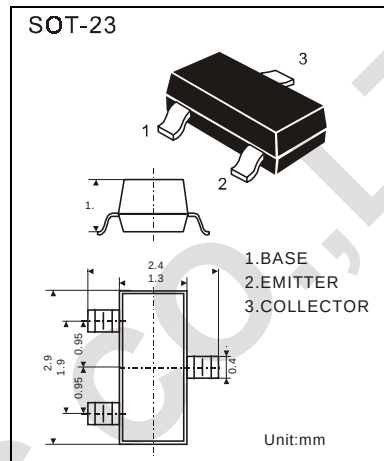
HIGH VOLTAGE TRANSISTOR

* Collector Dissipation: $P_c=225\text{mW}(T_a=25^\circ\text{C})$

* Collector-Emitter Voltage : $V_{ce0}=350\text{V}$

ABSOLUTE MAXIMUM RATINGS at $T_a=25^\circ\text{C}$

Characteristic	Symbol	Rating	
Collector-Base Voltage	V_{cbo}	350	V
Collector-Emitter Voltage	V_{ceo}	350	V
Emitter-Base Voltage	V_{ebo}	6	V
Collector Current	I_c	500	mA
Base Current	I_b	250	mA
Collector Dissipation $T_a=25^\circ\text{C}^*$	P_D	225	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55-150	$^\circ\text{C}$



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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	BV_{cbo}	350			V	$I_c=100\mu\text{A}$ $I_e=0$
Collector-Emitter Breakdown Voltage#	BV_{ceo}	350			V	$I_c=1\text{mA}$ $I_b=0$
Emitter-Base Breakdown Voltage	BV_{ebo}	6			V	$I_e=10\mu\text{A}$ $I_c=0$
Collector Cutoff Current	I_{cbo}			50	nA	$V_{cb}=250\text{V}$ $I_e=0$
Emitter Cutoff Current	I_{ebo}			50	nA	$V_{eb}=5\text{V}$ $I_c=0$
DC Current Gain	H_{fe1}	20				$V_{ce}=10\text{V}$ $I_c=1\text{mA}$
DC Current Gain	H_{fe2}	30				$V_{ce}=10\text{V}$ $I_c=10\text{mA}$
DC Current Gain	H_{fe3}	30		200		$V_{ce}=10\text{V}$ $I_c=30\text{mA}$
DC Current Gain	H_{fe4}	20		200		$V_{ce}=10\text{V}$ $I_c=50\text{mA}$
DC Current Gain	H_{fe5}	15				$V_{ce}=10\text{V}$ $I_c=100\text{mA}$
Collector-Emitter Saturation Voltage	$V_{ce(sat)}$			0.3	V	$I_c=10\text{mA}$ $I_b=1\text{mA}$
Collector-Emitter Saturation Voltage	$V_{ce(sat)}$			0.5	V	$I_c=30\text{mA}$ $I_b=3\text{mA}$
Base-Emitter Saturation Voltage	$V_{be(sat)}$			0.75	V	$I_c=10\text{mA}$ $I_b=1\text{mA}$
Base-Emitter Saturation Voltage	$V_{be(sat)}$			0.9	V	$I_c=30\text{mA}$ $I_b=3\text{mA}$
Base-Emitter On Voltage	$V_{be(on)}$			2	V	$V_{ce}=10\text{V}$ $I_c=100\text{mA}$
Current Gain Bandwidth Product	f_T	40		200	MHz	$V_{ce}=20\text{V}$ $I_c=10\text{mA}$
						$F=20\text{MHz}$
Collect Base Capacitance	C_{cb}			6	PF	$V_{cb}=20\text{V}$ $I_e=0$ $f=1\text{MHz}$
Emitter Base Capacitance	C_{eb}			80	PF	$V_{eb}=0.5\text{V}$ $f=1.00\text{MHz}$

* Total Device Dissipation : $FR=1 \times 0.75 \times 0.062\text{in Board}$, Derate 25°C .

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

DEVICE MARKING: MMBT6517LT=1Z