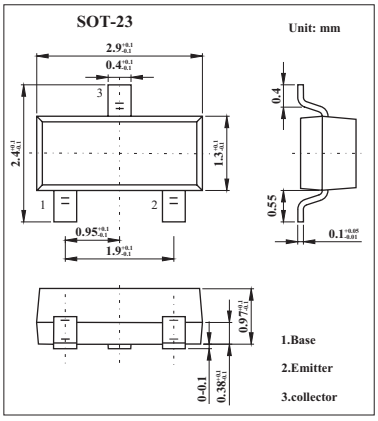
High Voltage Transistor

MMBT6520



Features

- PNP Silicon
- High Voltage Transistor

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-emitter voltage	V_{CEO}	-350	V
Collector-base voltage	V_{CBO}	-350	V
Emitter-base voltage	V_{EBO}	-5	V
Base current	I_B	-250	
Collector current-continuous	I_C	-500	mA
Total device dissipation FR-5 board *1			
@TA = 25℃	P_D	225	mW
derate above 25℃		1.8	mW/℃
Thermal resistance, junction-to-ambient	$R_{\theta JA}$	556	℃/W
Total device dissipation alumina substrate *2			
@TA = 25℃	P_D	300	mW
derate above 25℃		2.4	mW/℃
Thermal resistance, junction-to-ambient	$R_{\theta JA}$	417	℃/W
Junction and storage temperature	T_J, T_{stg}	-55 to +150	℃

* 1. FR-5 = 1.0 X 0.75 X 0.062 in.

* 2. Alumina = 0.4 X 0.3 X 0.024 in. 99.5% alumina.

MMBT6520

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	$V_{(BR)\ CE0}$	I_C = -1 mA, I_B = 0	-350			V
Collector-base breakdown voltage	$V_{(BR)\ CB0}$	I_C = -100 μA, I_E = 0	-350			
Emitter-base breakdown voltage	$V_{(BR)\ EB0}$	I_E = -10 μA, I_C = 0	-5			
Collector cutoff current	I_{CEO}	V_{CB} = -250 V, I_B = 0			-50	nA
Emitter cutoff current	I_{EBO}	V_{EB} = -4 V, I_C			-50	nA
DC current gain	h_{FE}	I_C = -1.0 mA, V_{CE} = -10 V	20			
		I_C = -10 mA, V_{CE} = -10 V	30			
		I_C = -30 mA, V_{CE} = -10 V	30		200	
		I_C = -50 mA, V_{CE} = -10 V	20		200	
		I_C = -100 mA, V_{CE} = -10 V	15			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = -10 mA, I_B = -1 mA			-0.3	V
		I_C = -20 mA, I_B = -2 mA			-0.35	V
		I_C = -30 mA, I_B = -3 mA			-0.5	V
		I_C = -50 mA, I_B = -5 mA			-1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = -10 mA, I_B = -1 mA			-0.75	V
		I_C = -20 mA, I_B = -2 mA			-0.85	V
		I_C = -30 mA, I_B = -3 mA			-0.9	V
Base-emitter on voltage	$V_{BE(on)}$	I_C = -100 mA, V_{CE} = -10 V			-2	V
Transition frequency	f_T	I_C = -10 mA, V_{CE} = -20 V, f = 20 MHz	40		200	MHz
Collector-base capacitance	C_{cb}	V_{CB} = -20 V, f = 1 MHz			6	pF
Emitter-base capacitance	Ceb	V_{EB} = -0.5 V, f = 1 MHz			100	pF

■ Marking

Marking	2Z