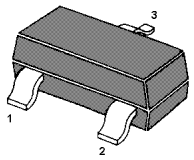
MMBT5350

PNP Silicon Epitaxial Planar Transistor



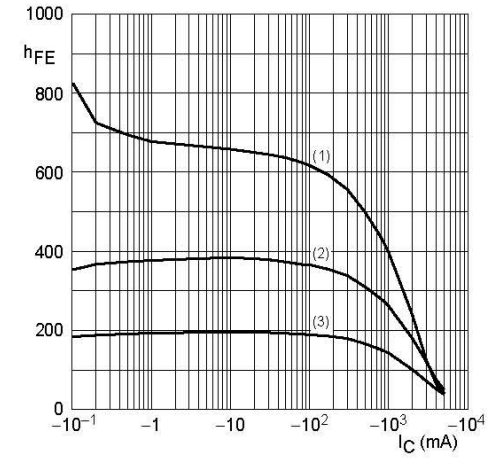
1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	50	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	3	A
Peak Collector Current	$-I_{CM}$	5	A
Base Current	$-I_B$	0.5	A
Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	- 65 to + 150	℃

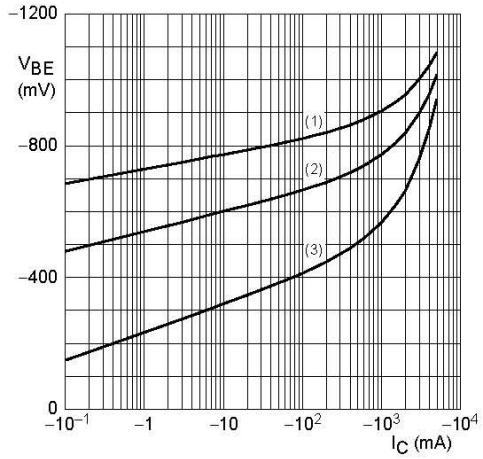
Characteristics at T_a= 25℃

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 2 V, $-I_C$ = 100 mA at $-V_{CE}$ = 2 V, $-I_C$ = 500 mA at $-V_{CE}$ = 2 V, $-I_C$ = 1 A at $-V_{CE}$ = 2 V, $-I_C$ = 2 A at $-V_{CE}$ = 2 V, $-I_C$ = 3 A	 h_{FE} h_{FE} h_{FE} h_{FE} h_{FE}	 200 200 200 130 80	 - - - - -	 - - - - -
Collector Base Cutoff Current at $-V_{CB}$ = 50 V	$-I_{CBO}$	-	100	nA
Emitter Base Cutoff Current at $-V_{EB}$ = 5 V	$-I_{EBO}$	-	100	nA
Collector Emitter Saturation Voltage at $-I_C$ = 500 mA, $-I_B$ = 50 mA at $-I_C$ = 1 A, $-I_B$ = 50 mA at $-I_C$ = 2 A, $-I_B$ = 100 mA at $-I_C$ = 2 A, $-I_B$ = 200 mA at $-I_C$ = 3 A, $-I_B$ = 300 mA	$-V_{CE(sat)}$	 - - - - -	 90 180 320 270 390	mV
Base Emitter Saturation Voltage at $-I_C$ = 2 A, $-I_B$ = 100 mA at $-I_C$ = 3 A, $-I_B$ = 300 mA	$-V_{BE(sat)}$	 - -	 1.1 1.2	V
Base Emitter Turn-on Voltage at $-V_{CE}$ = 2 V, $-I_C$ = 1 A	$-V_{BE(on)}$	-	1.2	V
Transition Frequency at $-V_{CE}$ = 5 V, $-I_C$ = 100 mA, f = 100 MHz	f_T	100	-	MHz
Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz	C_{ob}	-	35	pF



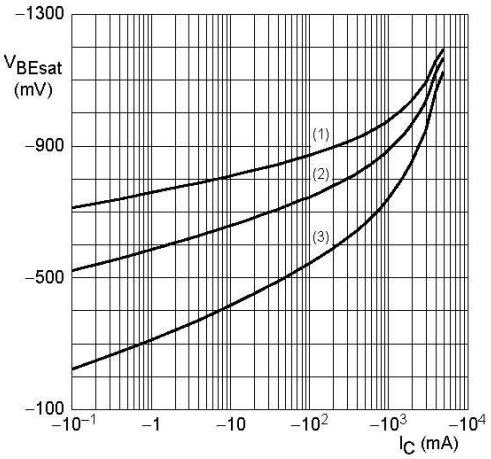
$V_{CE} = -2$ V.
(1) $T_{amb} = 150$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = -55$ °C.

DC current gain as a function of collector current; typical values.



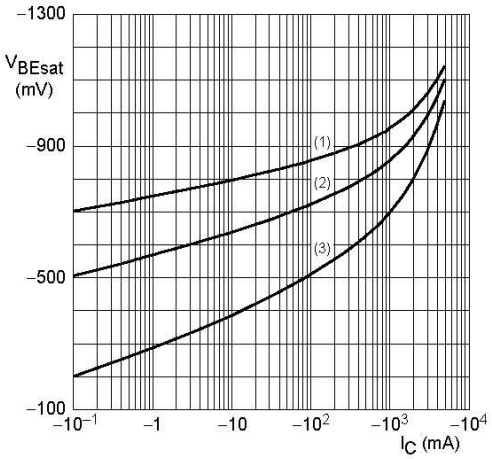
$V_{CE} = -2$ V.
(1) $T_{amb} = -55$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = 150$ °C.

Base-emitter voltage as a function of collector current; typical values.



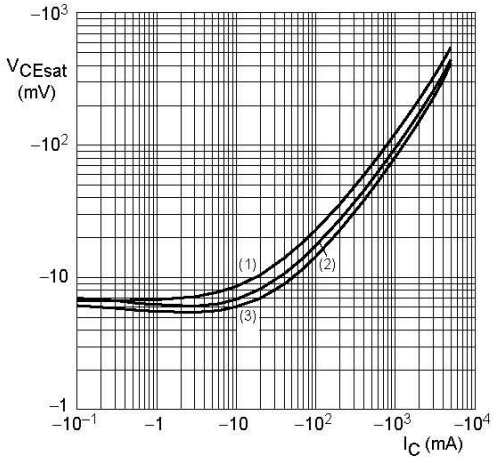
$I_C/I_B = 10$.
(1) $T_{amb} = -55$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = 150$ °C.

Base-emitter saturation voltage as a function of collector current; typical values.



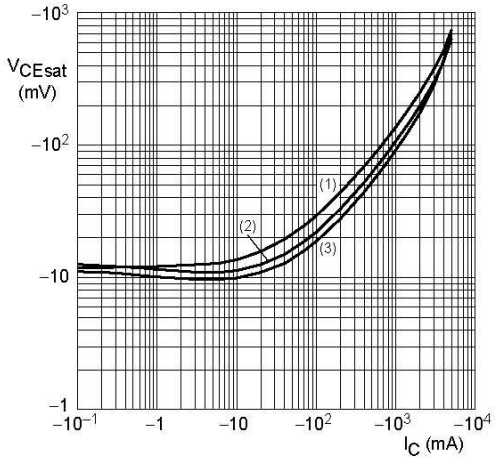
$I_C/I_B = 20$.
(1) $T_{amb} = -55$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = 150$ °C.

Base-emitter saturation voltage as a function of collector current; typical values.



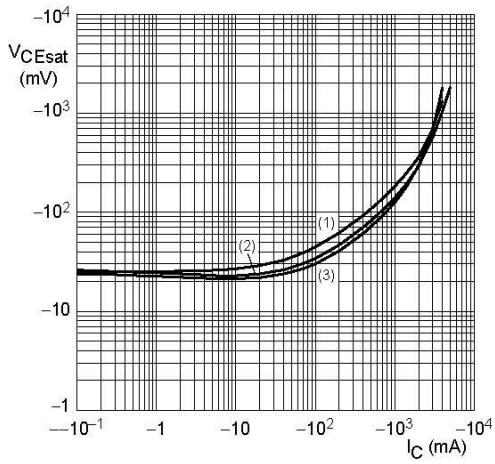
$I_C/I_B = 10$.
(1) $T_{amb} = 150$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = -55$ °C.

Collector-emitter saturation voltage as a function of collector current; typical values.



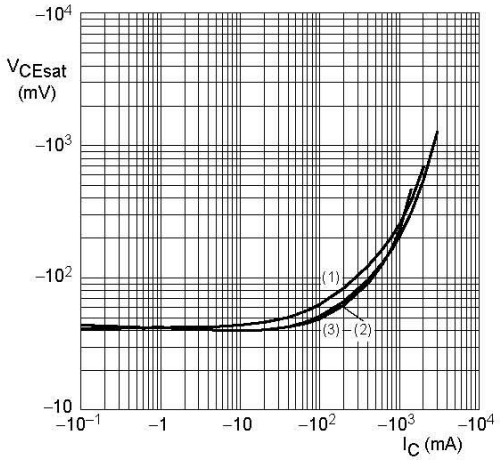
$I_C/I_B = 20$.
(1) $T_{amb} = 150$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = -55$ °C.

Collector-emitter saturation voltage as a function of collector current; typical values.



$I_C/I_B = 50$.
(1) $T_{amb} = 150$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = -55$ °C.

Collector-emitter saturation voltage as a function of collector current; typical values.



$I_C/I_B = 100$.
(1) $T_{amb} = 150$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = -55$ °C.

Collector-emitter saturation voltage as a function of collector current; typical values.