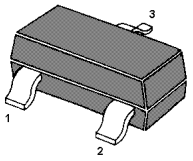
MMBT4350

NPN Silicon Epitaxial Planar Transistor



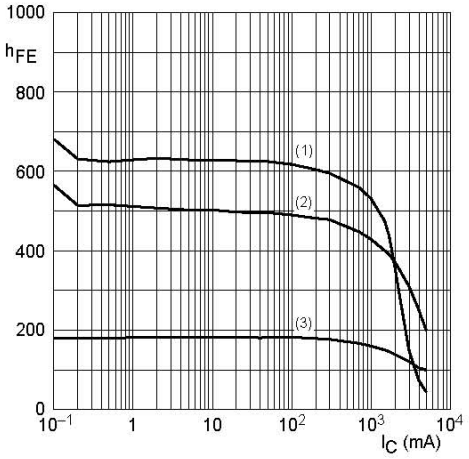
1. Base 2. Emitter 3. Collector
TO-236 Plastic Package

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	℃

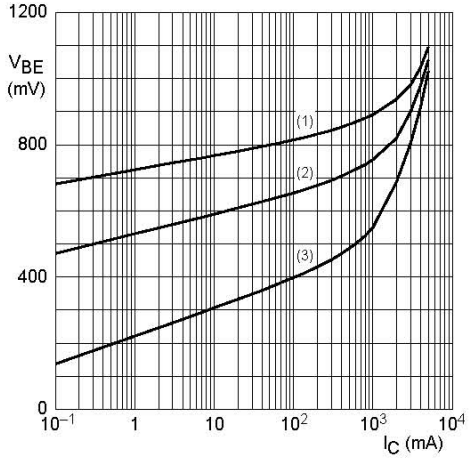
Characteristics at T_a= 25℃

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}	 300 300 300 200 100	 - - - - -	 - - - - -
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	 $V_{CE(sat)}$	 - - - - -	 80 160 280 260 370	 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 Turnon 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}	-	25	pF



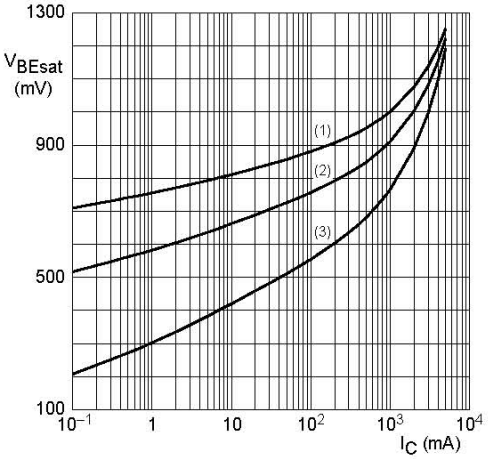
V_{CE} = 2 V.
(1) T_{amb} = 150 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = −55 °C.

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



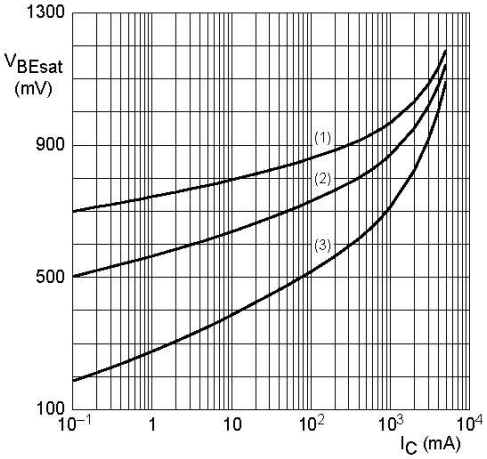
V_{CE} = 2 V.
(1) T_{amb} = −55 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = 150 °C.

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



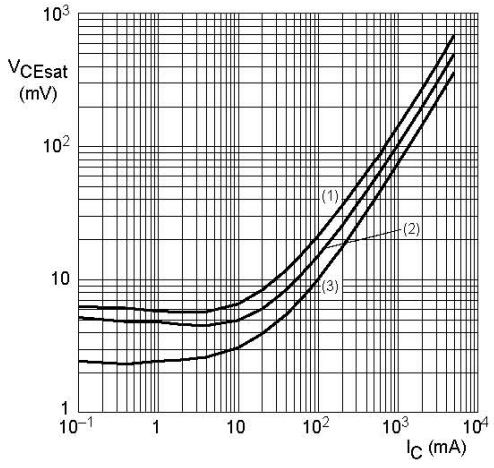
I_C/I_B = 10.
(1) T_{amb} = −55 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = 150 °C.

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



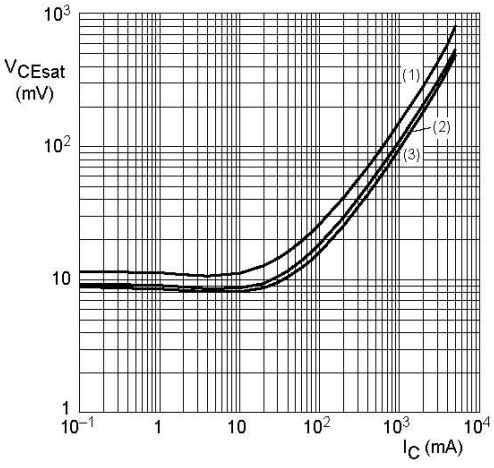
I_C/I_B = 20.
(1) T_{amb} = −55 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = 150 °C.

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



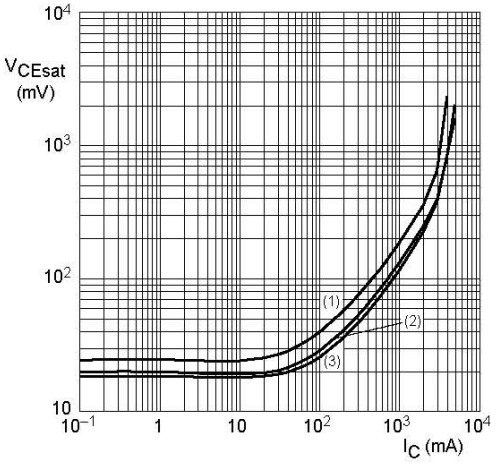
I_C/I_B = 10.
(1) T_{amb} = 150 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = −55 °C.

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



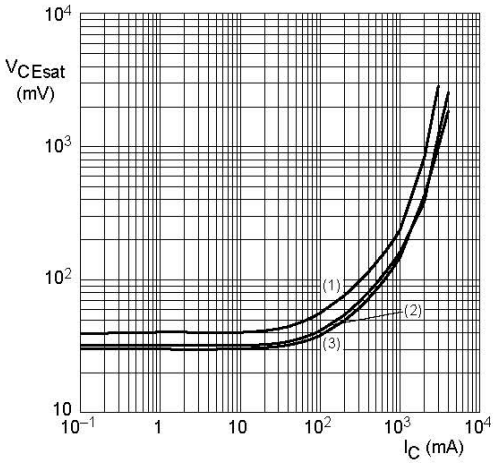
I_C/I_B = 20.
(1) T_{amb} = 150 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = −55 °C.

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.