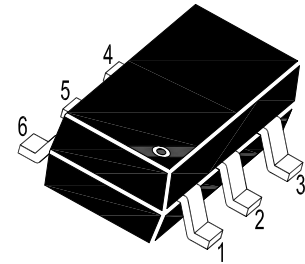
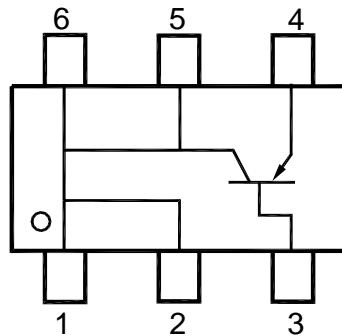


MMBT5350D

PNP Silicon Epitaxial Planar Transistors



1. Collector 2. Collector 3. Base
4. Emitter 5. Collector 6. Collector
SOT-26 Plastic Package

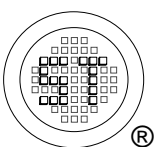
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	3	A
Peak Collector Current	$-I_{CM}$	5	A
Peak Base Current	$-I_{BM}$	1	A
Power Dissipation	P_{tot}	600 ¹⁾ 750 ²⁾ 1200 ³⁾	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

¹⁾ Device mounted on an FR4 printed-circuit board (PCB), single-sided copper, tin-plated, mounting pad for collector 1 cm²

²⁾ Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for collector 6 cm²

³⁾ Device mounted on an FR4 4-layer PCB



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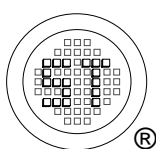


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Characteristics at $T_a = 25\text{ }^\circ\text{C}$

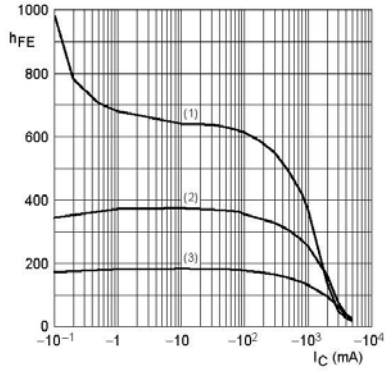
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 2\text{ V}$, $-I_C = 500\text{ mA}$ at $-V_{CE} = 2\text{ V}$, $-I_C = 1\text{ A}$ at $-V_{CE} = 2\text{ V}$, $-I_C = 2\text{ A}$	h_{FE} h_{FE} h_{FE}	200 200 100	- - -	- - -
Collector Base Cutoff Current at $-V_{CB} = 50\text{ V}$	$-I_{CBO}$	-	100	nA
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	100	nA
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	60	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	50	-	V
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	6	-	V
Collector Emitter Saturation Voltage at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$ at $-I_C = 1\text{ A}$, $-I_B = 50\text{ mA}$ at $-I_C = 2\text{ A}$, $-I_B = 200\text{ mA}$	$-V_{CE(sat)}$	- - -	0.1 0.18 0.3	V
Base Emitter Saturation Voltage at $-I_C = 2\text{ A}$, $-I_B = 200\text{ mA}$	$-V_{BE(sat)}$	-	1.2	V
Base Emitter Turn-on Voltage at $-V_{CE} = 2\text{ V}$, $-I_C = 1\text{ A}$	$-V_{BE(on)}$	-	1.1	V
Transition Frequency at $-V_{CE} = 5\text{ V}$, $-I_C = 100\text{ mA}$, $f = 100\text{ MHz}$	f_T	100	-	MHz
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	40	pF



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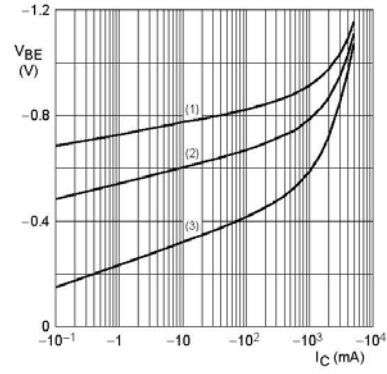


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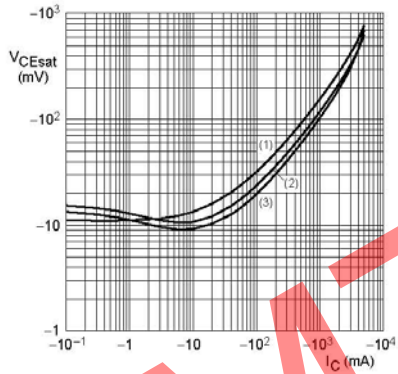
$V_{CE} = -2V$,
 (1) $T_{amb} = 150^{\circ}C$,
 (2) $T_{amb} = 25^{\circ}C$,
 (3) $T_{amb} = -55^{\circ}C$.

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



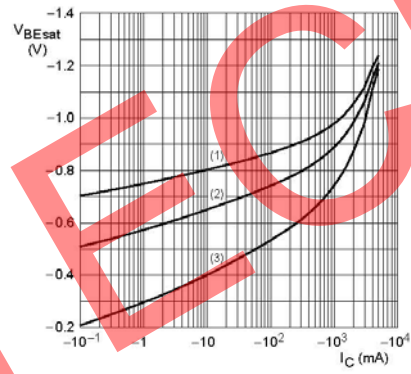
$V_{CE} = -2V$,
 (1) $T_{amb} = -55^{\circ}C$,
 (2) $T_{amb} = 25^{\circ}C$,
 (3) $T_{amb} = 150^{\circ}C$.

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



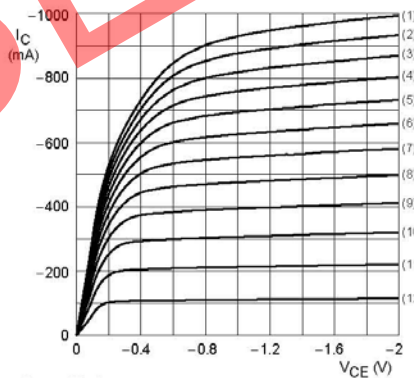
$I_C/I_B = 10$,
 (1) $T_{amb} = 150^{\circ}C$,
 (2) $T_{amb} = 25^{\circ}C$,
 (3) $T_{amb} = -55^{\circ}C$.

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



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

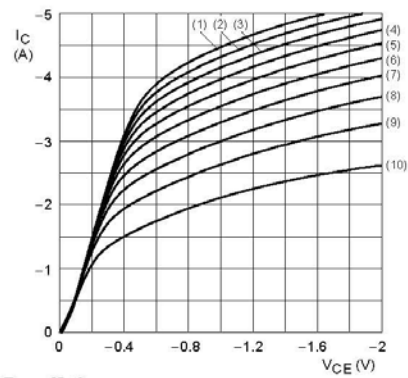
Base-emitter saturation voltage as a function of collector current; typical values.



$T_{amb} = 25^{\circ}C$.

- | | | |
|-----------------------------|-----------------------------|------------------------------|
| (1) $I_B = -3.96\text{ nA}$ | (5) $I_B = -2.64\text{ nA}$ | (9) $I_B = -1.32\text{ nA}$ |
| (2) $I_B = -3.63\text{ nA}$ | (6) $I_B = -2.31\text{ nA}$ | (10) $I_B = -0.99\text{ nA}$ |
| (3) $I_B = -3.30\text{ nA}$ | (7) $I_B = -1.98\text{ nA}$ | (11) $I_B = -0.66\text{ nA}$ |
| (4) $I_B = -2.97\text{ nA}$ | (8) $I_B = -1.65\text{ nA}$ | (12) $I_B = -0.33\text{ nA}$ |

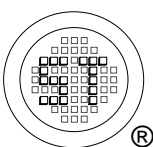
Collector current as a function of collector-emitter voltage; typical values.



$T_{amb} = 25^{\circ}C$.

- | | | |
|----------------------------|----------------------------|----------------------------|
| (1) $I_B = -250\text{ mA}$ | (5) $I_B = -150\text{ mA}$ | (9) $I_B = -50\text{ mA}$ |
| (2) $I_B = -225\text{ mA}$ | (6) $I_B = -125\text{ mA}$ | (10) $I_B = -25\text{ mA}$ |
| (3) $I_B = -200\text{ mA}$ | (7) $I_B = -100\text{ mA}$ | |
| (4) $I_B = -175\text{ mA}$ | (8) $I_B = -75\text{ mA}$ | |

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



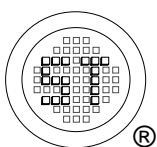
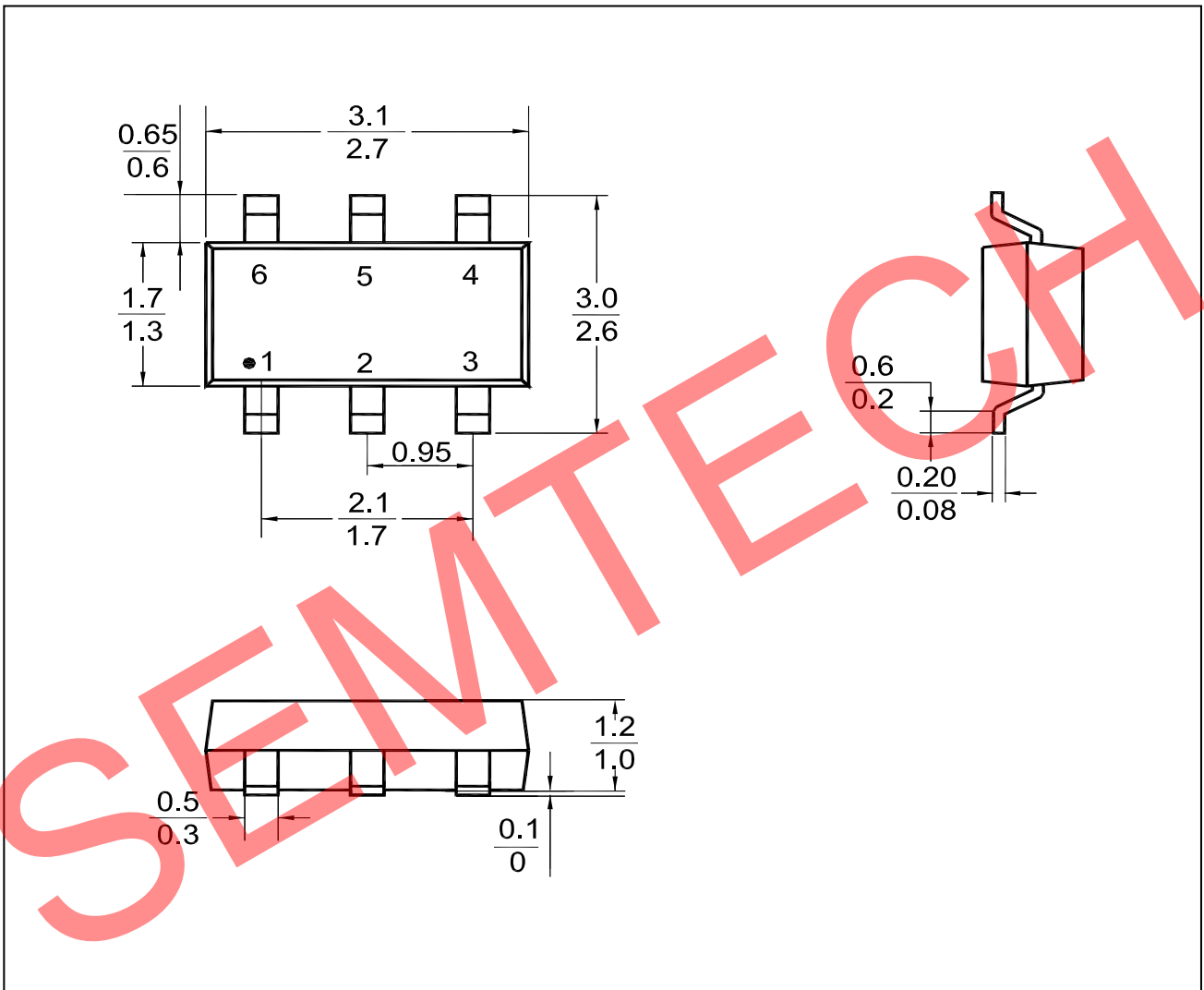
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Package Outline Dimensions (Units: mm)

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