

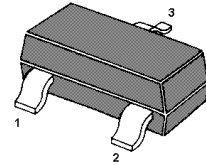
MMBT8050



NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications.

As complementary type the PNP transistor MMBT8550 is recommended.



1.BASE 2.EMITTER 3.COLLECTOR
SOT-23 Plastic Package

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

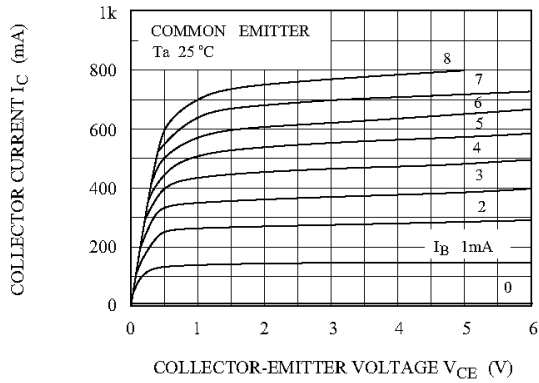
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
Collector Emitter Voltage	V_{CEO}	25	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_S	- 55 to + 150	$^\circ\text{C}$

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

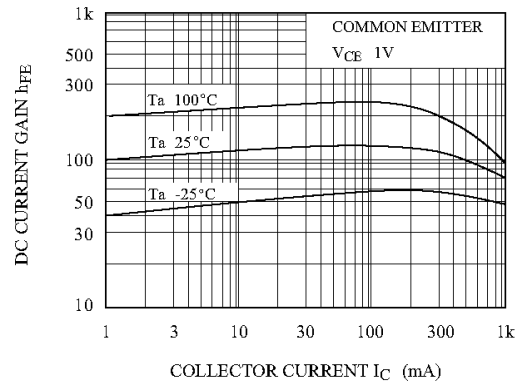
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 1\text{ V}$, $I_C = 100\text{ mA}$ at $V_{CE} = 1\text{ V}$, $I_C = 500\text{ mA}$	MMBT8050C h_{FE}	100	-	250	-
	MMBT8050D h_{FE}	160	-	400	-
	h_{FE}	40	-	-	-
Collector Base Cutoff Current at $V_{CB} = 35\text{ V}$	I_{CBO}	-	-	100	nA
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	40	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 2\text{ mA}$	$V_{(BR)CEO}$	25	-	-	V
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.5	V
Base Emitter Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	$V_{BE(sat)}$	-	-	1.2	V
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	f_T	-	100	-	MHz



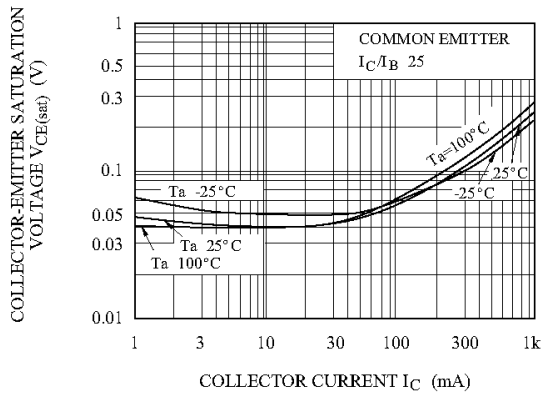
$I_C - V_{CE}$



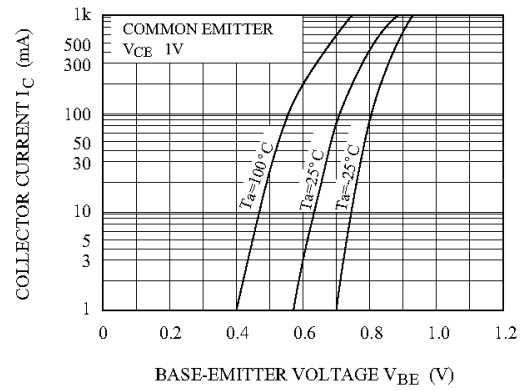
$h_{FE} - I_C$



$V_{CE(sat)} - I_C$



$I_C - V_{BE}$



$P_c - T_a$

