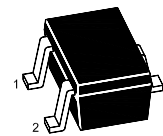


NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications


 1.Base 2.Emitter 3.Collector
 SOT-323 Plastic Package

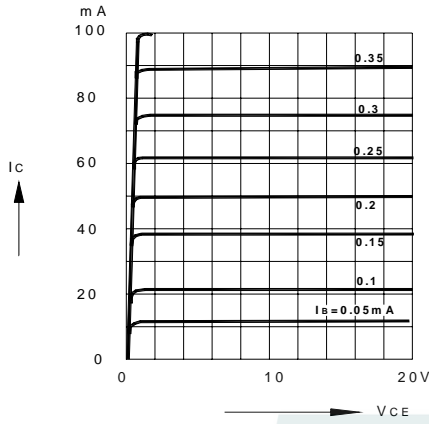
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Emitter Voltage	V_{CEO}	25	V
Collector Base Voltage	V_{CBO}	40	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	600	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	- 55 to + 150	$^\circ\text{C}$

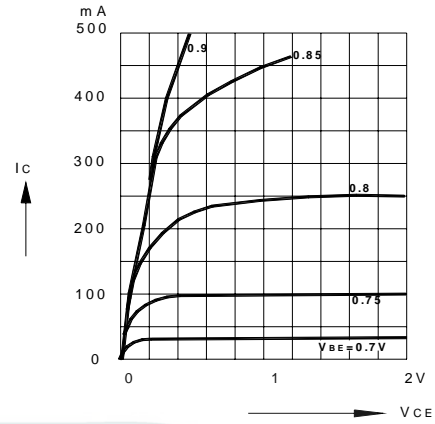
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 1\text{ V}$, $I_C = 100\text{ mA}$ at $V_{CE} = 1\text{ V}$, $I_C = 500\text{ mA}$	MMBT8050CW h_{FE}	100	-	250	-
	MMBT8050DW h_{FE}	160	-	400	-
	h_{FE}	40	-	-	-
Collector Cutoff Current at $V_{CB} = 35\text{ V}$	I_{CBO}	-	-	100	nA
Collector Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	$V_{CE(sat)}$	-	-	0.5	V
Base Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	$V_{BE(sat)}$	-	-	1.2	V
Collector Emitter Breakdown Voltage at $I_C = 2\text{ mA}$	$V_{(BR)CEO}$	25	-	-	V
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	40	-	-	V
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	6	-	-	V
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$, $f = 50\text{ MHz}$	f_T	-	100	-	MHz
Collector Base Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{CBO}	-	12	-	pF

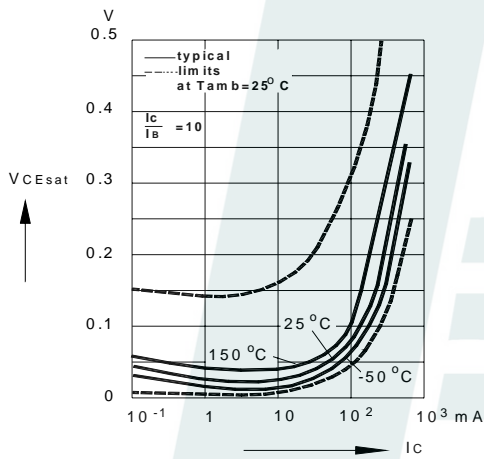
Common emitter collector characteristics



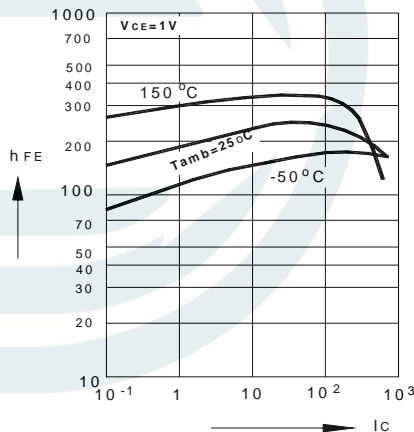
Common emitter collector characteristics



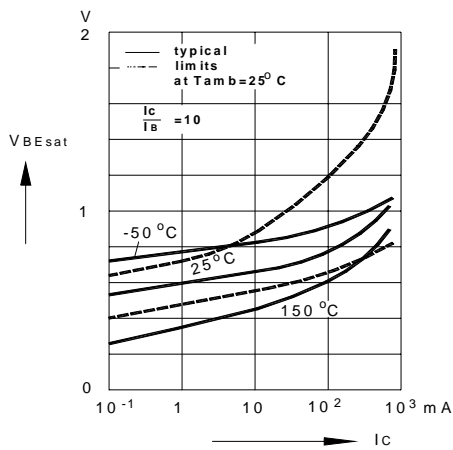
Collector saturation voltage versus collector current



DC current gain versus collector current



Base saturation voltage versus collector current



Common emitter collector characteristics

