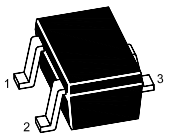
MMBT8050W

NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications



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

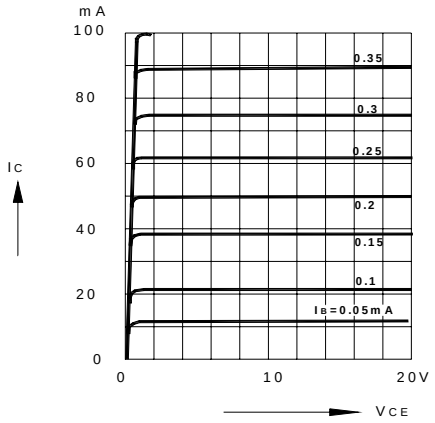
Absolute Maximum Ratings (T_a = 25 °C)

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	°C
Storage Temperature Range	T_S	- 55 to + 150	°C

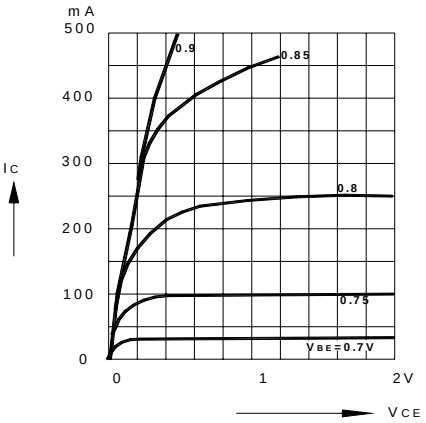
Characteristics at T_a = 25 °C

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

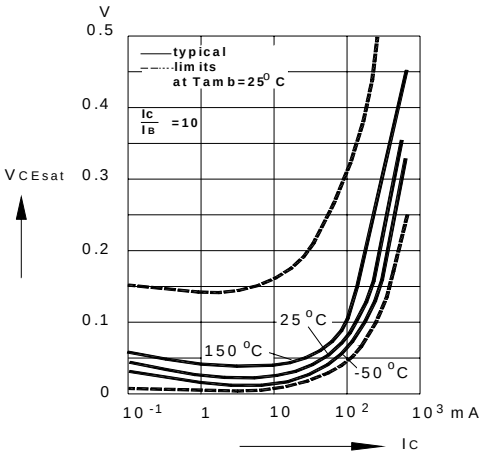
Common emitter collector characteristics



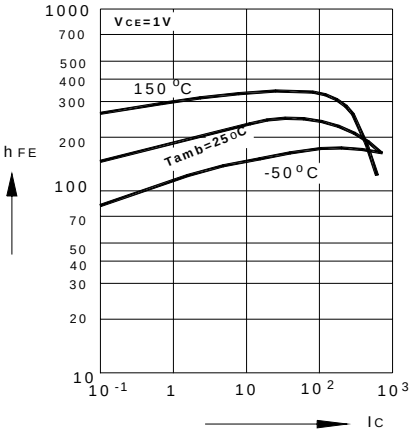
Common emitter collector characteristics



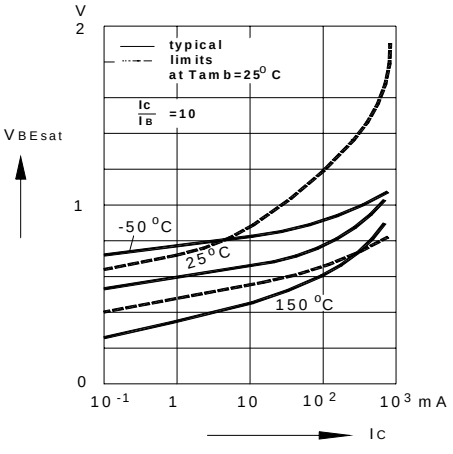
Collector saturation voltage versus collector current



DC current gain versus collector current



Base saturation voltage versus collector current



Common emitter collector characteristics