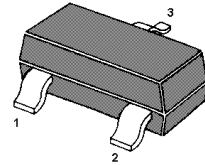


# MMBT8050

## NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications.

As complementary type the PNP transistor MMBT8550 is recommended.



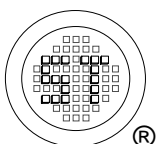
1.BASE 2.EMITTER 3.COLLECTOR  
SOT-23 Plastic Package

### 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 $V_{CE} = 1\text{ V}$ , $I_C = 100\text{ mA}$	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	



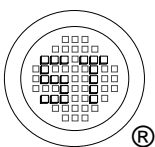
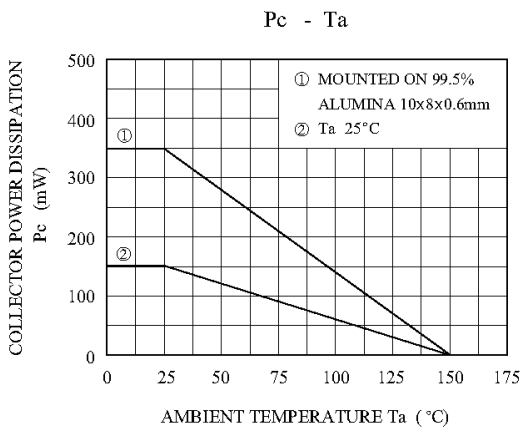
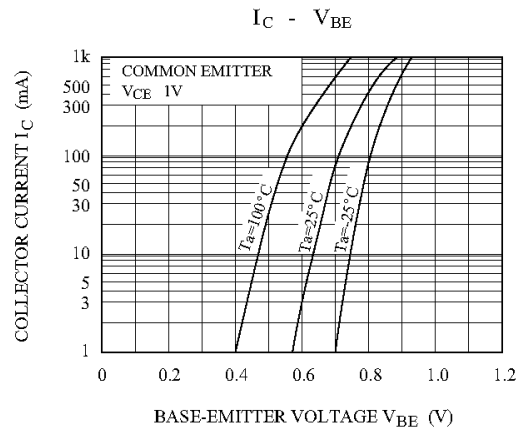
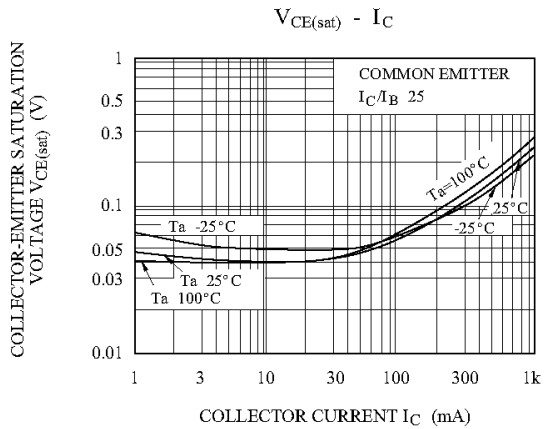
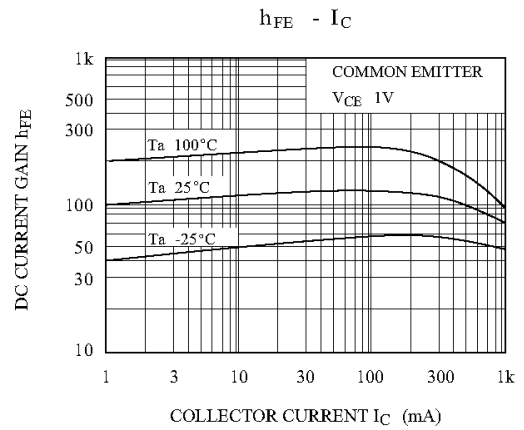
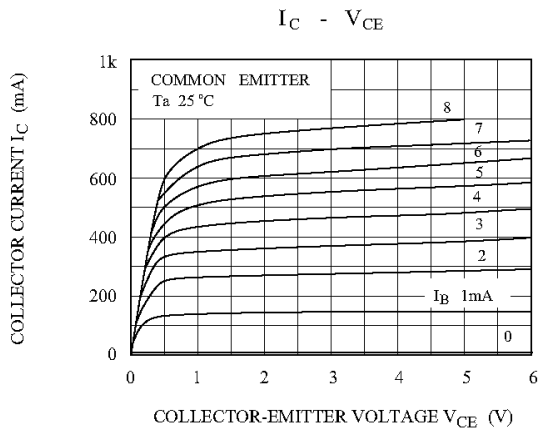
**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company  
listed on the Hong Kong Stock Exchange, Stock Code: 724)



Dated : 11/04/2008

# MMBT8050



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ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506098