FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.
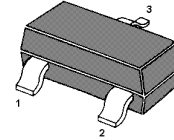TEL: 852-2790 0314   FAX: 852-2790 0206

MMBT8050 (2A)

NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications. Especially
suitable for AF-driver stages and low power output
stages.

The transistor is subdivided into two groups C and
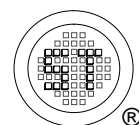D according to its DC current gain.

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

Absolute Maximum Ratings (T_a = 25 $^{\circ}$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	2	A
Power Dissipation	P_{tot}	350	mW
Junction Temperature	T_j	150	$^{\circ}$C
Storage Temperature Range	T_S	- 55 to + 150	$^{\circ}$C

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

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = 1 V, I_C = 5 mA	h_{FE}	45	-	-
at V_{CE} = 1 V, I_C = 100 mA MMBT8050C	h_{FE}	100	250	-
MMBT8050D	h_{FE}	160	300	-
at V_{CE} = 1 V, I_C = 1.5 A	h_{FE}	40	-	-
Collector Base Cutoff Current at V_{CB} = 35 V	I_{CBO}	-	100	nA
Emitter Base Cutoff Current at V_{EB} = 6 V	I_{EBO}	-	100	nA
Collector Base Breakdown Voltage at I_C = 100 µA	$V_{(BR)CBO}$	40	-	V
Collector Emitter Breakdown Voltage at I_C = 2 mA	$V_{(BR)CEO}$	25	-	V
Emitter Base Breakdown Voltage at I_E = 100 µA	$V_{(BR)EBO}$	6	-	V
Collector Emitter Saturation Voltage at I_C = 1.5 A, I_B = 100 mA	$V_{CE(sat)}$	-	0.5	V
Base Emitter Saturation Voltage at I_C = 1.5 A, I_B = 100 mA	$V_{BE(sat)}$	-	1.2	V
Base Emitter Voltage at V_{CE} = 1 V, I_C = 10 mA	$V_{BE(on)}$	-	1	V
Transition Frequency at V_{CE} = 10 V, I_C = 50 mA	f_T	100	-	MHz

Dated : 11/04/2008