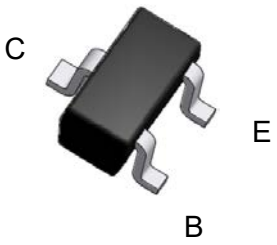
Features

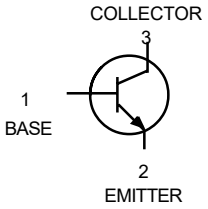
- Simplifies Circuit Design
- Green EMC
- Small Package
- Green Device Available



SOT-23

Applications

- Portable Devices



Order information

Device	Marking	Shipping
MMBT8050	J3Y	3000/Tape &Reel

Absolute Maximum Ratings

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	600	mA
P_D	Power Dissipation (FR-4 Board – minimum pad)	300	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	417	°C /W
T_J T_{STG}	Junction & Storage Temperature Range	-55 to +150	℃

Electrical Characteristic (Ta= 25ºC)

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (Note 1)	I_C =1mA, I_B =0A	25	-	Volts
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C =100uA, I_E =0A	40	-	Volts
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E =100uA, I_B =0A	5	-	Volts
I_{EBO}	Emitter Cutoff Current	V_{EB} =5V,I_C=0	-	100	nA
I_{CBO}	Collector Cutoff Current	V_{CB} =40V,I_E=0	-	100	nA

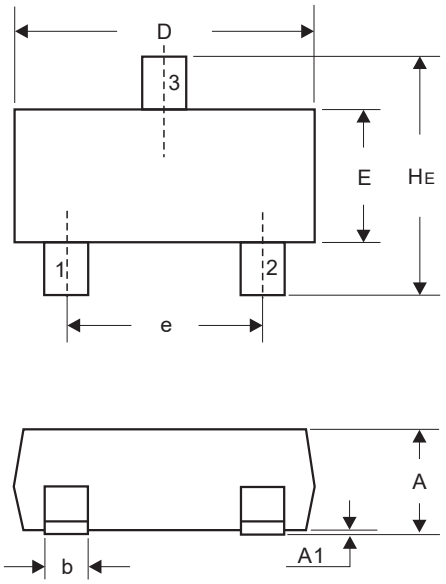
On Characteristics (Note 1)

Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
H_{FE}	DC Current Dain	I_C =100mA, V_{CE} =1V	120	400	-
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C=500mA, I_B=50mA	-	0.6	Volts

Outline and Dimensions

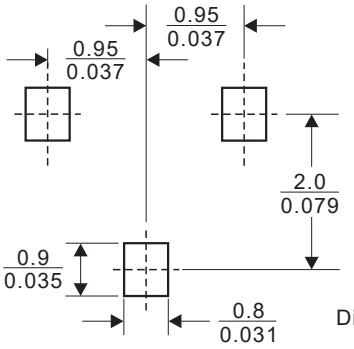
SOT-23 Mechanical Data

SOT-23



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	0.89	1.11	0.035	0.044
A1	0.01	0.10	0.001	0.004
b	0.37	0.50	0.015	0.020
c	0.09	0.18	0.003	0.007
D	2.80	3.04	0.110	0.120
E	1.20	1.40	0.047	0.055
e	1.78	2.04	0.070	0.081
L	0.35	0.69	0.014	0.029
HE	2.10	2.64	0.083	0.104

Recommended Mounting Pad Layout



Dimensions in (millimeters / inches)