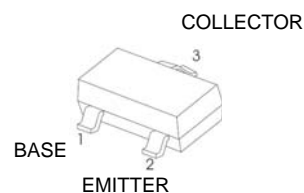




### M8050 TRANSISTOR (NPN)

#### FEATURES

Power dissipation



MARKING: Y11

SOT-23

#### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	40	V
V <sub>CEO</sub>	Collector-Emitter Voltage	25	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current	800	mA
P <sub>C</sub>	Collector Power Dissipation	200	mW
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	625	°C/W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55~+150	°C

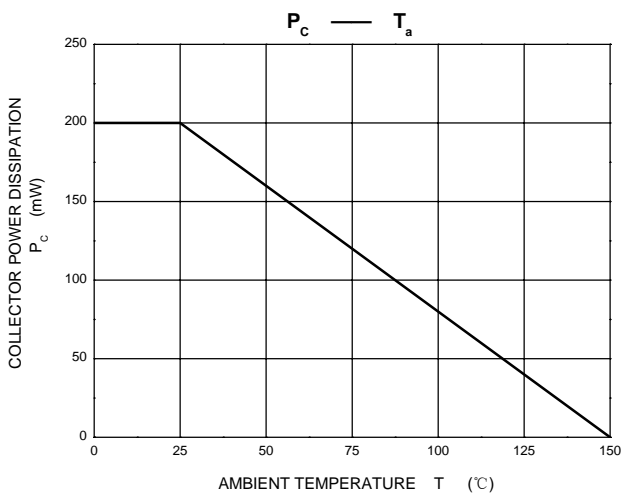
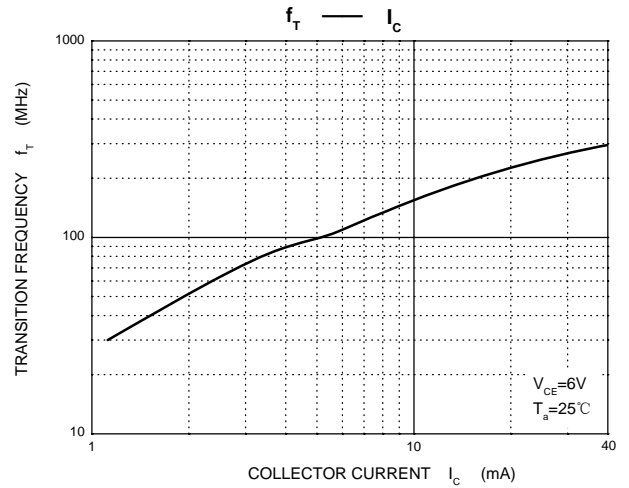
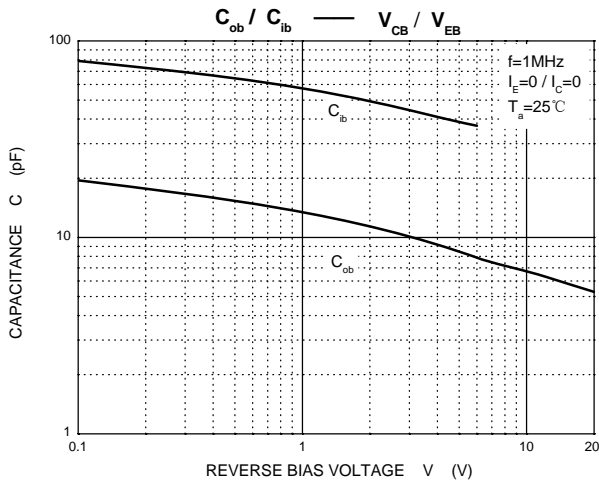
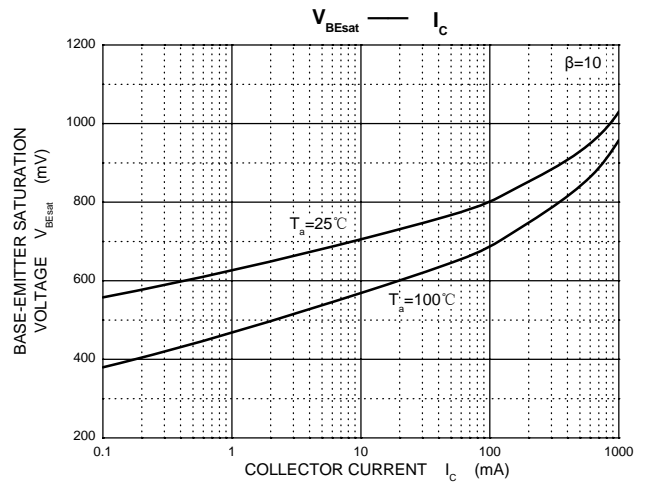
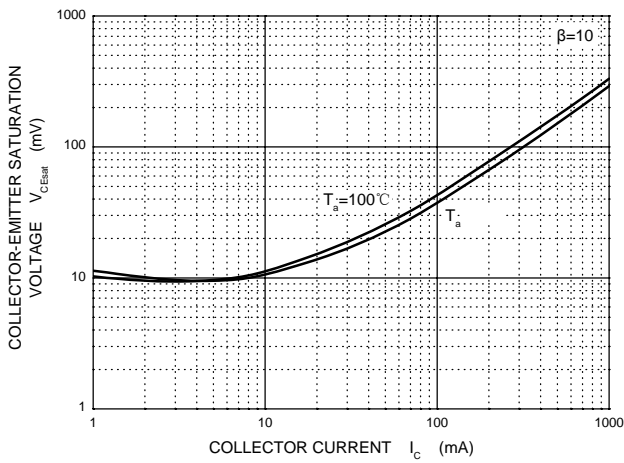
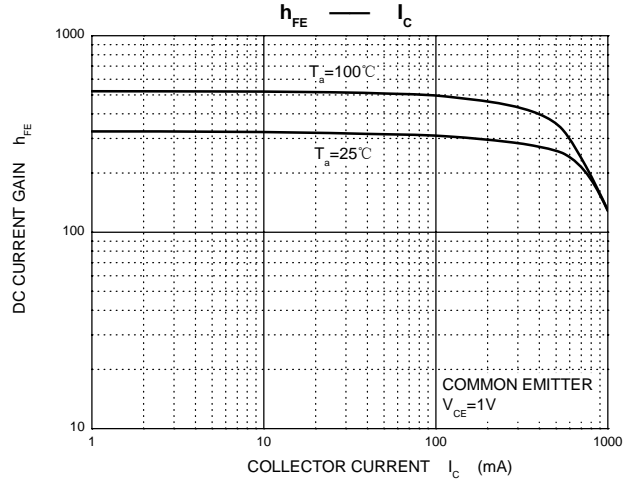
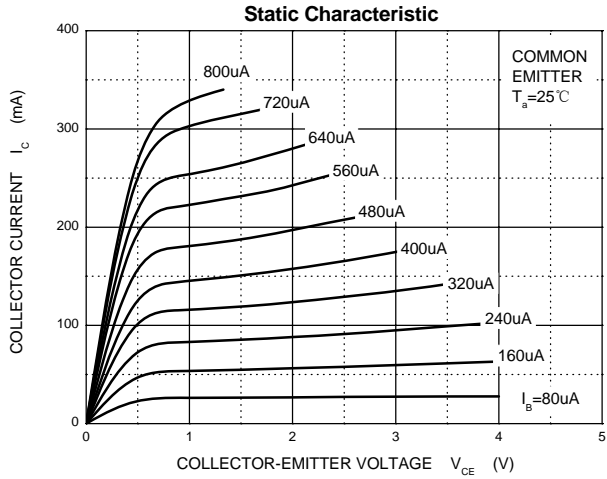
#### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	40		V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub> *	I <sub>C</sub> =1mA, I <sub>B</sub> =0	25		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	6		V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 35V, I <sub>E</sub> =0		0.1	μA
Collector cut-off current	I <sub>CEO</sub>	V <sub>CE</sub> = 20V, I <sub>B</sub> =0		0.1	μA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =5mA	45		
	h <sub>FE(2)</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =100mA	80	400	
	h <sub>FE(3)</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =800mA	40		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 800mA, I <sub>B</sub> =80mA		0.5	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =800mA, I <sub>B</sub> = 80mA		1.2	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =6V, I <sub>C</sub> = 20mA, f=30MHz	150		MHz

\* Pulse Test : pulse width ≤ 300μs , duty cycle ≤ 2%.

#### CLASSIFICATION OF h<sub>FE(2)</sub>

Rank	L	H
Range	80-300	300-400

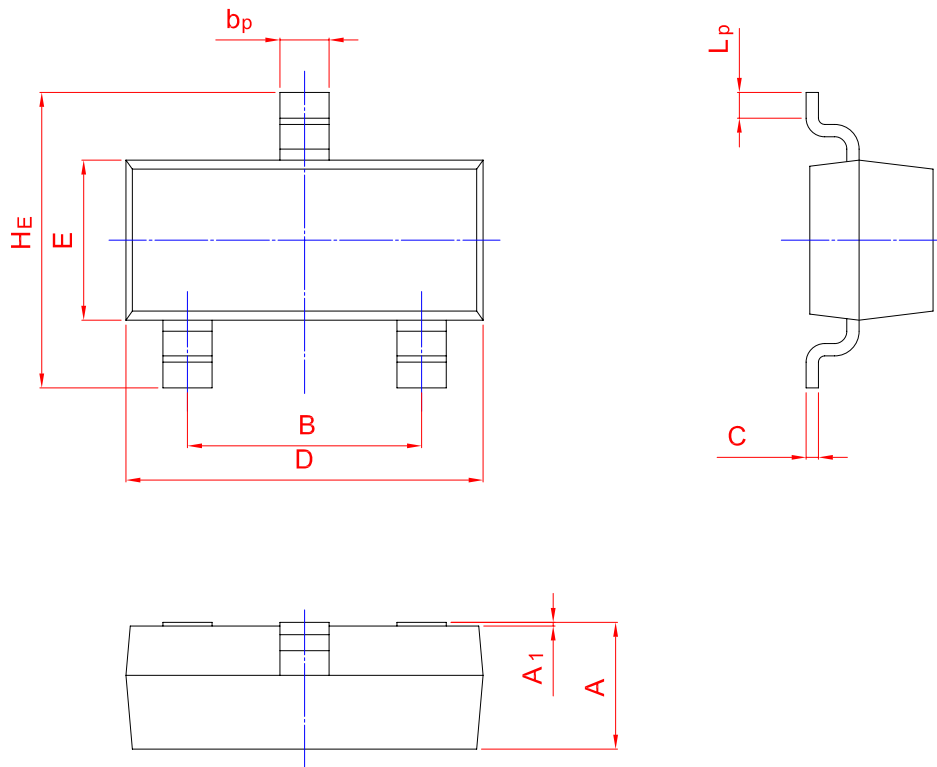
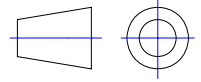




## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20