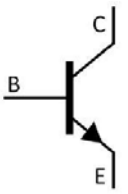
迈拓电子
MAITUO ELECTRONIC

PBSS4160T

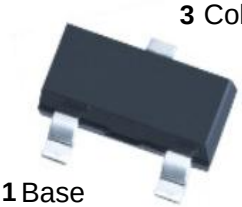


Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package.

Features

Low $V_{CE(sat)}$, high current.



SOT23

Applications

General purpose switching and muting

LCD back-lighting

Supply line switching circuits.

h_{FE} Classifications & Marking

h_{FE} Range	>200
Marking	HU5

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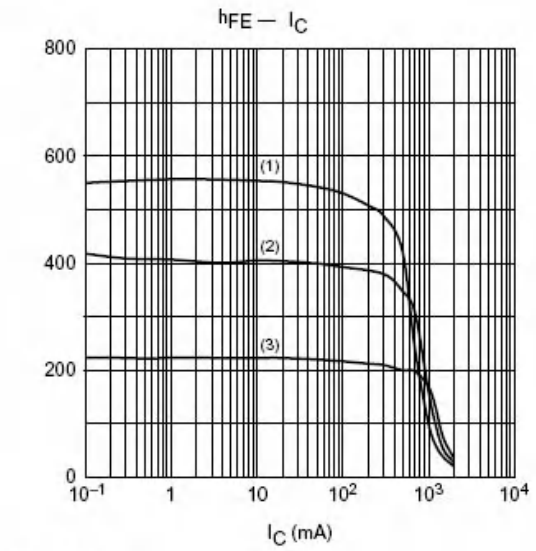
Absolute Maximum Ratings(Ta=25℃)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Peak Collector Current	I_{CM}	2	A
Base Current	I_B	0.3	A
Peak Base Current	I_{BM}	1	A
Collector Power Dissipation	P_C	400	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55～150	℃

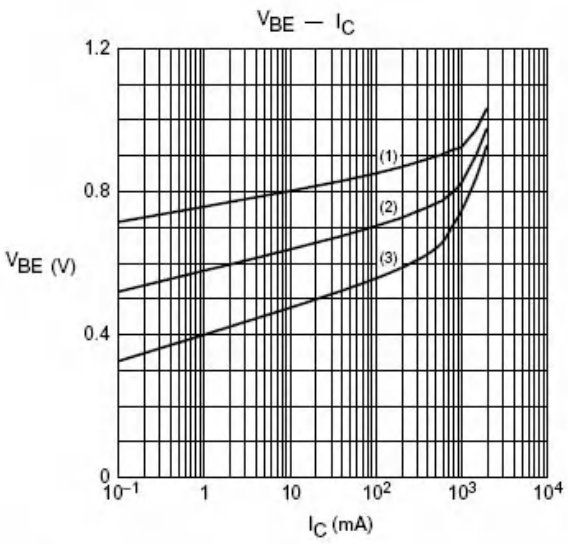
Electrical Characteristics(Ta=25℃)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Collector Cut-Off Current	I_{CBO}	V_{CB}=60V I_E=0A			100	nA
		V_{CB}=60V I_E=0A T_j=150℃			50	μA
Collector Cut-Off Current	I_{CES}	V_{CE}=60V V_{BE}=0V			100	nA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5.0V I_C=0A			100	nA
DC Current Gain	$h_{FE(1)}$	V_{CE}=5.0V I_C=500mA	200	350		
	$h_{FE(2)}$	V_{CE}=5.0V I_C=1.0mA	250	400		
	$h_{FE(3)}$	V_{CE}=5.0V I_C=1.0A	100	150		
Collector-Emitter Saturation Voltage	$V_{CE(sat)(1)}$	I_C=100mA I_B=1.0mA		90	110	mV
	$V_{CE(sat)(2)}$	I_C=500mA I_B=50mA		110	140	mV
	$V_{CE(sat)(3)}$	I_C=1.0A I_B=100mA		200	250	mV
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=1.0A I_B=50mA		0.95	1.1	V
Base-Emitter Voltage	V_{BE}	V_{CE}=5.0V I_C=1.0A		0.82	0.9	V
Transition Frequency	f_T	V_{CE}=10V I_C=50mA f=100MHz	150	220		MHz
Output Capacitance	C_C	V_{CB}=10V I_E=0 f=1.0MHz		5.5	10	pF

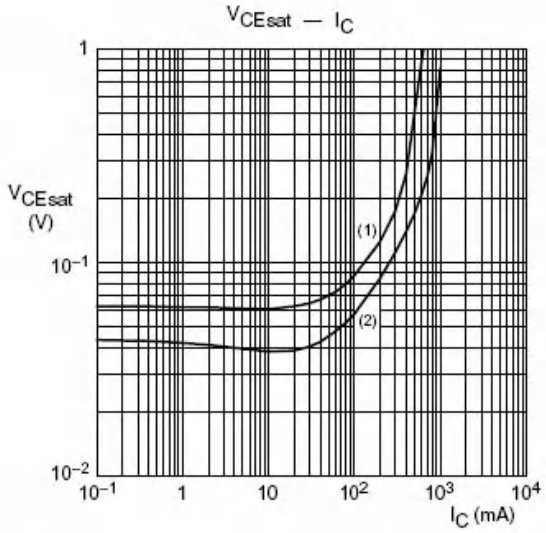
Electrical Characteristic Curve



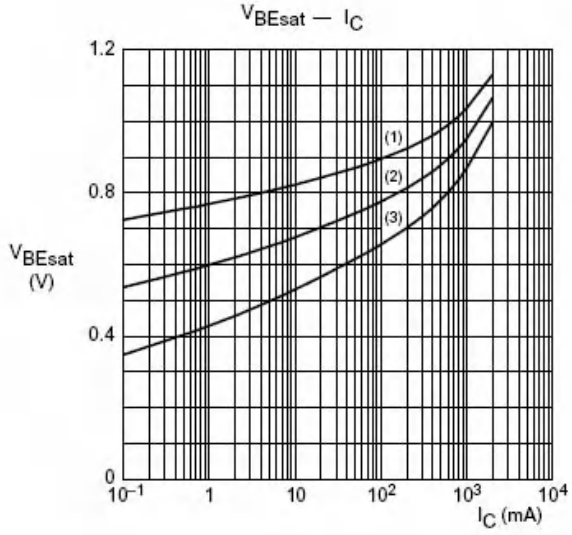
V_{CE} = 5 V.
(1) T_{amb} = 100 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = −55 °C.



V_{CE} = 5 V.
(1) T_{amb} = −55 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = 100 °C.



T_{amb} = 25 °C.
(1) I_C/I_B = 100.
(2) I_C/I_B = 50.



I_C/I_B = 20.
(1) T_{amb} = −55 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = 100 °C.

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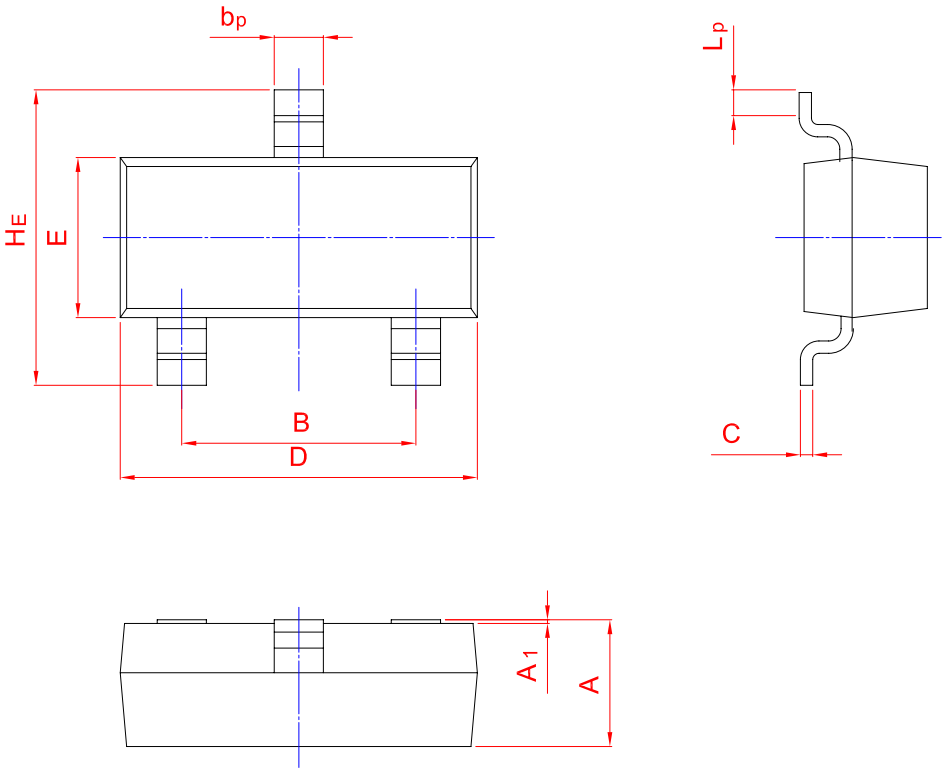
PACKAGE OUTLINE

Plastic surface mounted package; 3 leads **SOT-23**



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