



PBSS4160T

Descriptions

Silicon NPN transistor in a SOT-23 Plastic Package.

Features

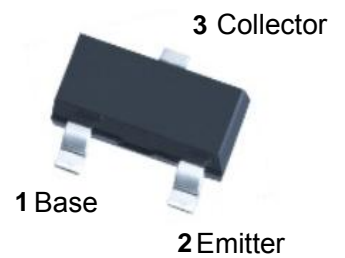
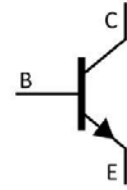
Low $V_{CE(sat)}$, high current.

Applications

General purpose switching and muting

LCD back-lighting

Supply line switching circuits.



SOT23

h_{FE} Classifications & Marking

h_{FE} Range	>200
Marking	HU5



Absolute Maximum Ratings(Ta=25°C)

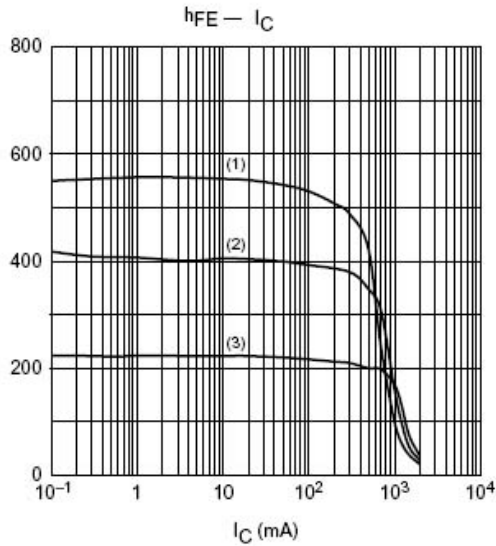
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	80	V
Collector to Emitter Voltage	V_{CEO}	60	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Peak Collector Current	I_{CM}	2	A
Base Current	I_B	0.3	A
Peak Base Current	I_{BM}	1	A
Collector Power Dissipation	P_C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

Electrical Characteristics(Ta=25°C)

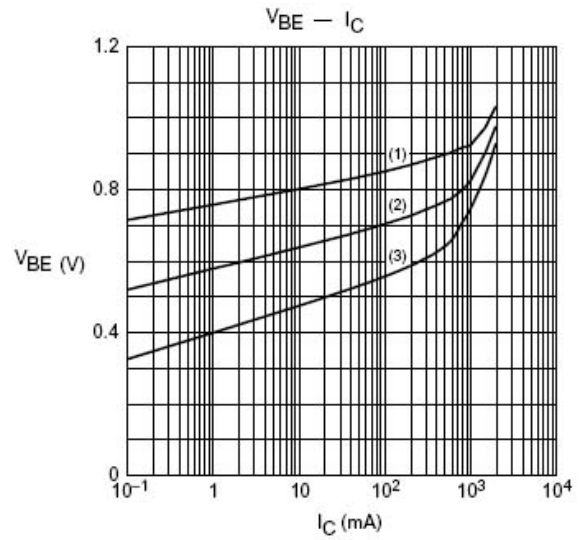
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Collector Cut-Off Current	I_{CBO}	$V_{CB}=60V$ $I_E=0A$			100	nA
		$V_{CB}=60V$ $I_E=0A$ $T_j=150^\circ C$			50	μA
Collector Cut-Off Current	I_{CES}	$V_{CE}=60V$ $V_{BE}=0V$			100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0A$			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



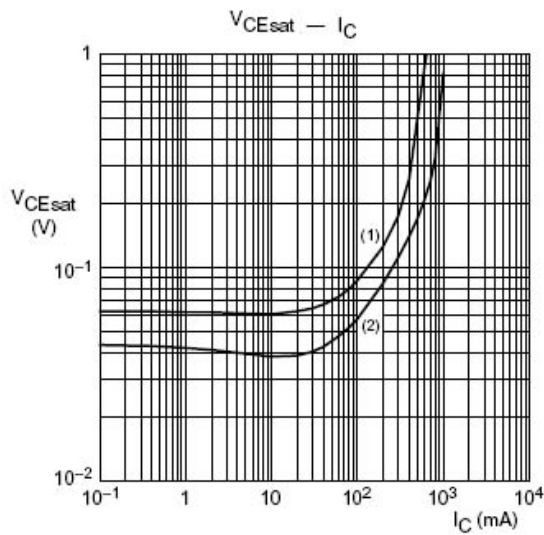
Electrical Characteristic Curve



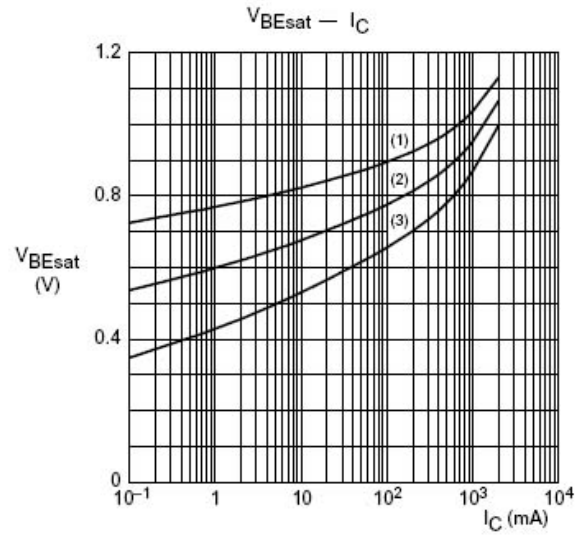
$V_{CE} = 5\text{ V}$.
 (1) $T_{amb} = 100\text{ }^{\circ}\text{C}$.
 (2) $T_{amb} = 25\text{ }^{\circ}\text{C}$.
 (3) $T_{amb} = -55\text{ }^{\circ}\text{C}$.



$V_{CE} = 5\text{ V}$.
 (1) $T_{amb} = -55\text{ }^{\circ}\text{C}$.
 (2) $T_{amb} = 25\text{ }^{\circ}\text{C}$.
 (3) $T_{amb} = 100\text{ }^{\circ}\text{C}$.



$T_{amb} = 25\text{ }^{\circ}\text{C}$.
 (1) $I_C/I_B = 100$.
 (2) $I_C/I_B = 50$.



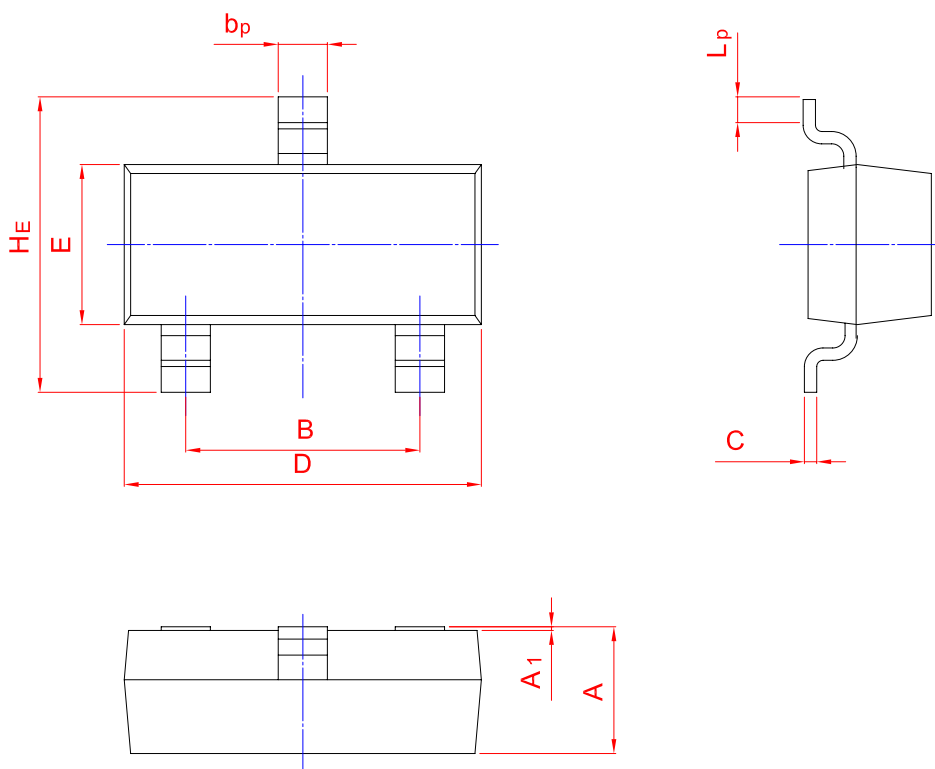
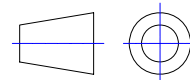
$I_C/I_B = 20$.
 (1) $T_{amb} = -55\text{ }^{\circ}\text{C}$.
 (2) $T_{amb} = 25\text{ }^{\circ}\text{C}$.
 (3) $T_{amb} = 100\text{ }^{\circ}\text{C}$.



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