

SEBT818BA
HIGH GAIN LOW VOLTAGE PNP POWER TRANSISTOR

DESCRIPTION

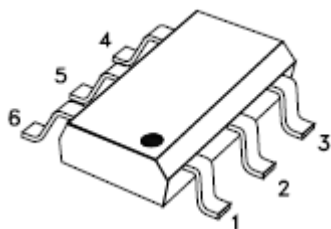
The device is manufactured in low voltage PNP Planar Technology by using a "Base Island" layout.
 The resulting Transistor shows exceptional high gain performance coupled with very low saturation voltage

Features

- VERY LOW COLLECTOR EMITTER SATURATION VOLTAGE
- DC CURRENT GAIN>100(h_{PE})
- 3 A CONTINUOUS COLLECTOR CURRENT(I_C)
- SURFACE-MOUNTING SOT23-5L PACKAGE IN TAPE & REEL

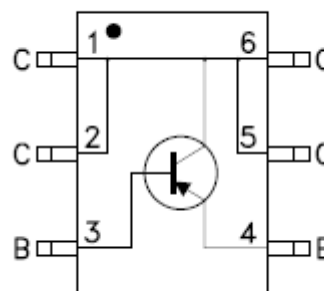
APPLICATIONS

- POWER MANAGEMENT IN PORTABLE EQUIPMENTS
- SWITCHING REGULATOR IN BATTERY CHARGER APPLICATIONS



**SOT23-6L
(TSOP6)**

INTERNAL SCHEMATIC DIAGRAM



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Base Voltage ($I_E = 0$)	V_{CBO}	-30	V
Collector-Emitter Voltage ($I_B = 0$)	V_{CEO}	-30	V
Emitter-Base Voltage ($I_C = 0$)	V_{EBO}	-5	V
Collector Current	I_C	-3	A
Collector Peak Current	I_{CM}	-6	A
Base Current	I_B	-0.2	A
Base Peak Current	I_{BM}	-0.5	A
Total Dissipation at $T_C = 25\text{ }^{\circ}\text{C}$	P_{tot}	1.2	W
Storage Temperature	T_{stg}	-65 to 150	$^{\circ}\text{C}$
Max. Operating Junction Temperature	T_j	150	$^{\circ}\text{C}$

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THERMAL DATA

$R_{thj-amb}^{(1)}$	Thermal Resistance Junction-ambient	Max	104.2	°C/W
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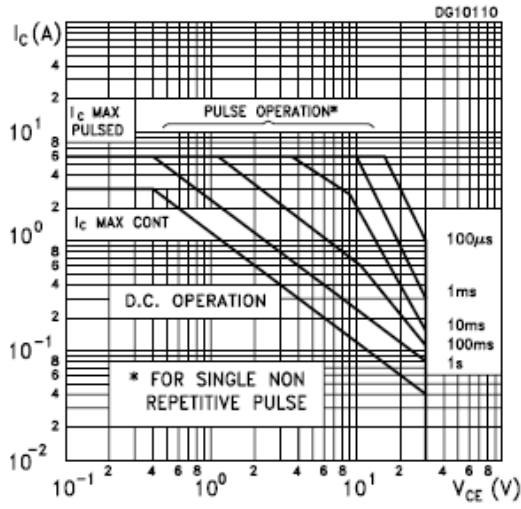
Electrical Characteristics

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current ($I_E = 0$)	$V_{CB} = -30\text{ V}$ $V_{CB} = -30\text{ V } T_C = 125\text{ °C}$			-0.1 -20	μA μA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = -5\text{ V}$			-0.1	μA
$V_{(BR)CEO}^*$	Collector-Emitter Breakdown Voltage ($I_B = 0$)	$I_C = -10\text{ mA}$	-30			V
$V_{CE(sat)}^*$	Collector-Emitter Saturation Voltage	$I_C = -0.5\text{ A } I_B = -5\text{ mA}$ $I_C = -2\text{ A } I_B = -20\text{ mA}$ $I_C = -1.2\text{ A } I_B = -20\text{ mA}$		-0.075 -0.21	-0.15 -0.5 -0.25	V V V
$V_{BE(sat)}^*$	Base-Emitter Saturation Voltage	$I_C = -0.5\text{ A } I_B = -5\text{ mA}$ $I_C = -1.2\text{ A } I_B = -20\text{ mA}$ $I_C = -2\text{ A } I_B = -20\text{ mA}$		-0.74	-1.1 -1.1 -1.2	V V V
$V_{BE(ON)}^*$	Base-Emitter Voltage	$I_C = -0.5\text{ A } V_{CE} = -2\text{ V}$		-0.71	-1.1	V
h_{FE}^*	DC Current Gain	$I_C = -0.5\text{ A } V_{CE} = -1\text{ V}$ $I_C = -2.5\text{ A } V_{CE} = -3\text{ V}$	100 100			

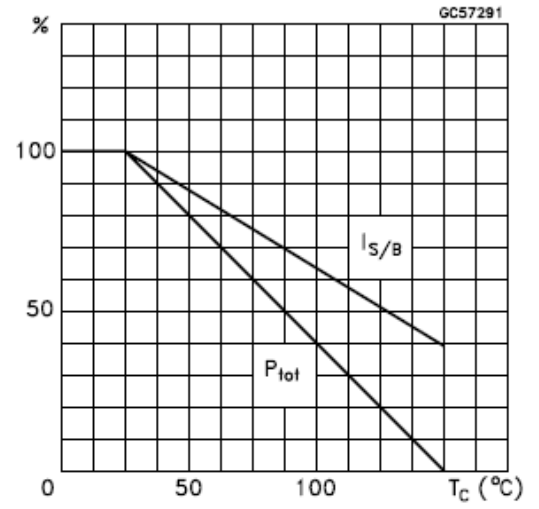
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TYPICAL CHARACTERISTICS

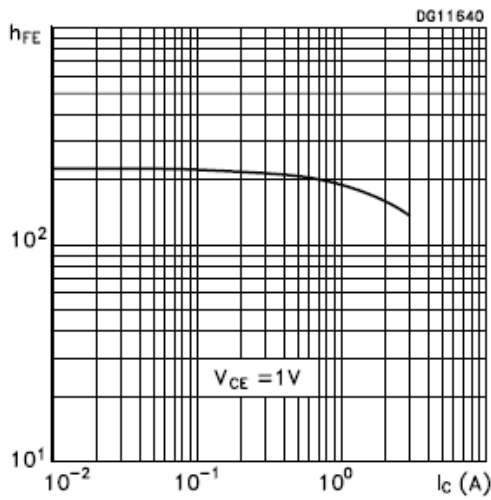
Safe Operating Area



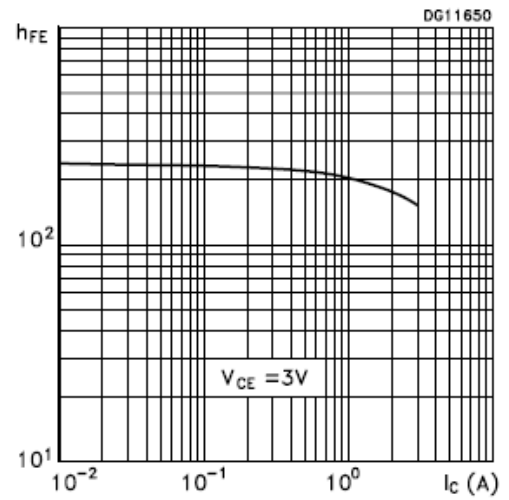
Derating Curve



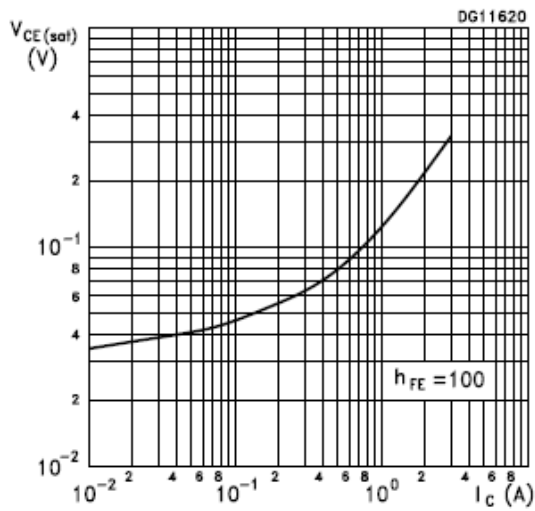
DC Current Gain



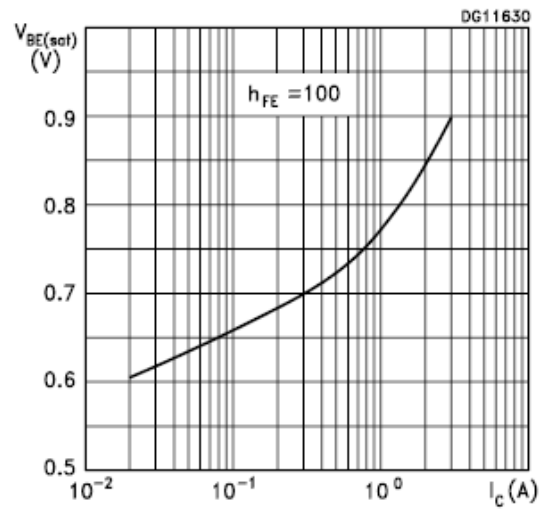
DC Current Gain



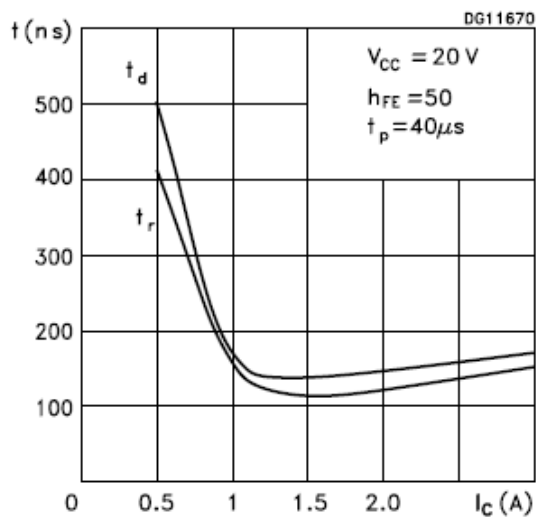
Collector-Emitter Saturation Voltage



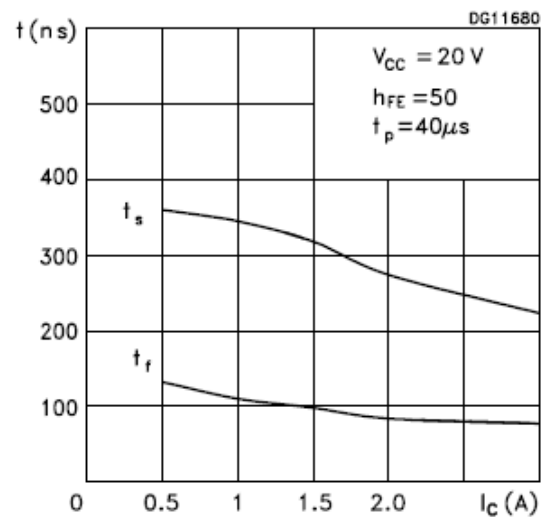
Base-Emitter Saturation Voltage



Switching Times Resistive Load

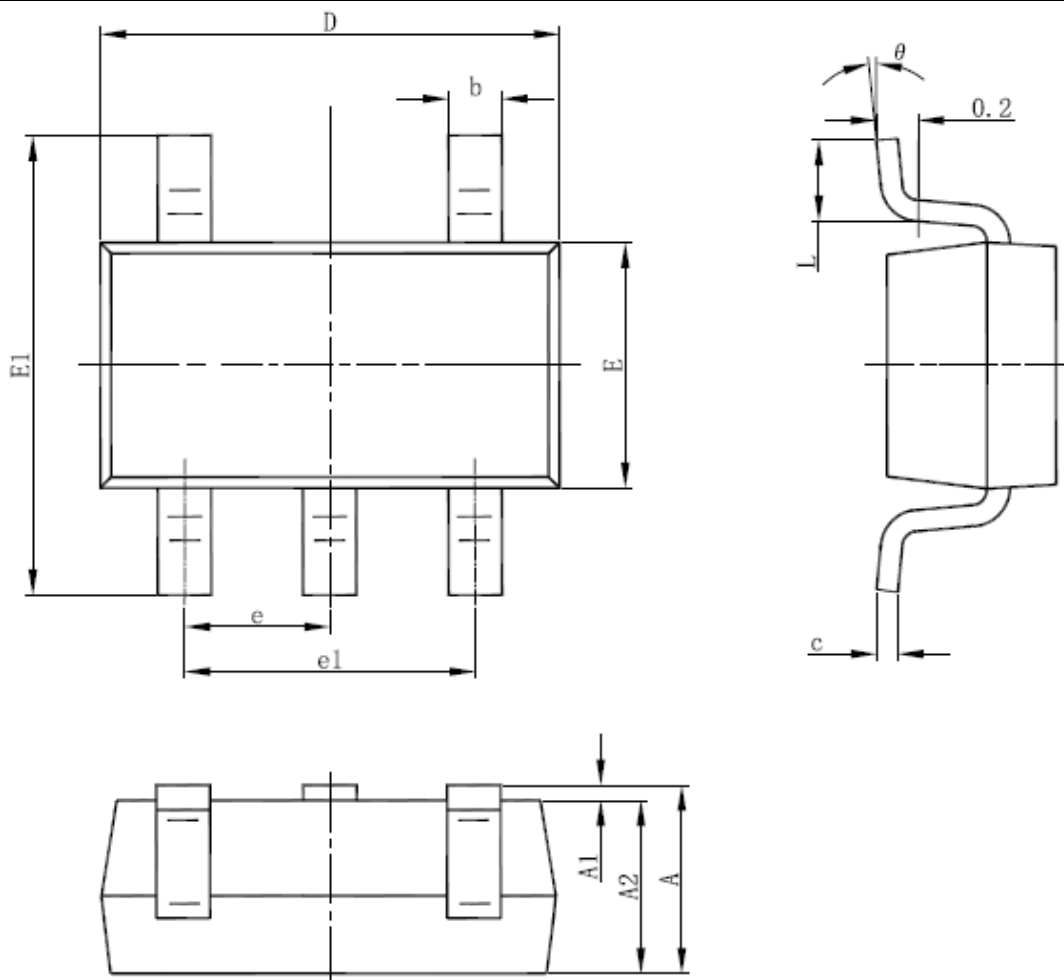


Switching Times Resistive Load



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SOT23-5L MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
theta	0°	8°	0°	8°

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