

**SEBT818BA**  
**HIGH GAIN LOW VOLTAGE PNP POWER TRANSISTOR**

**DESCRIPTION**

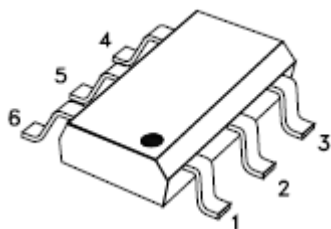
The device is manufactured in low voltage PNP Planar Technology by using a "Base Island" layout.  
 The resulting Transistor shows exceptional high gain performance coupled with very low saturation voltage

**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

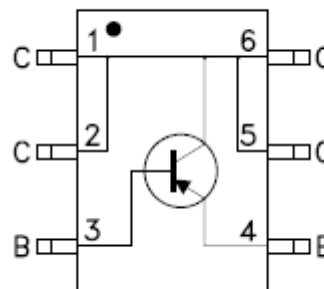
**APPLICATIONS**

- 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 $T_C = 25$ oC	$P_{tot}$	1.2	W
Storage Temperature	$T_{stg}$	-65 to 150	°C
Max. Operating Junction Temperature	$T_j$	150	°C

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## THERMAL DATA

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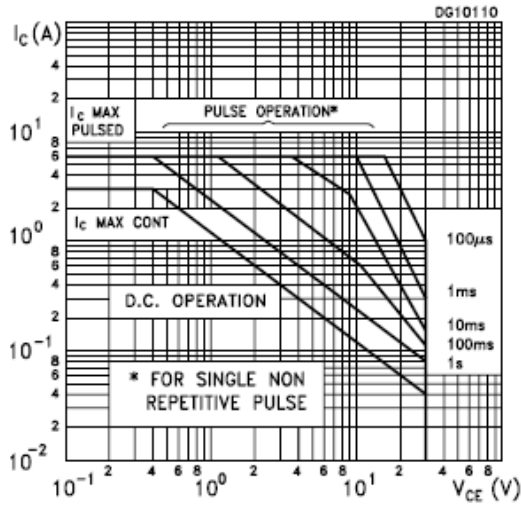
## Electrical Characteristics

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

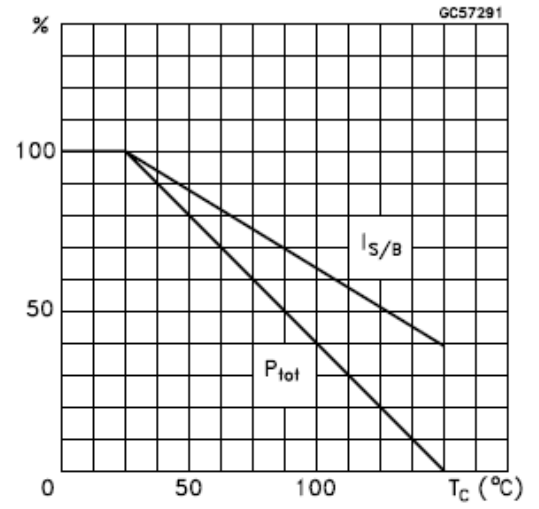
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## TYPICAL CHARACTERISTICS

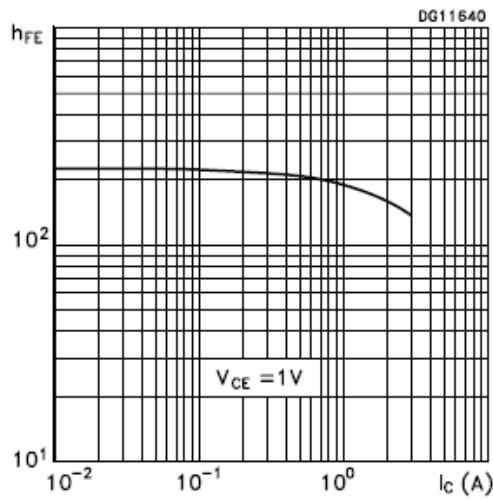
Safe Operating Area



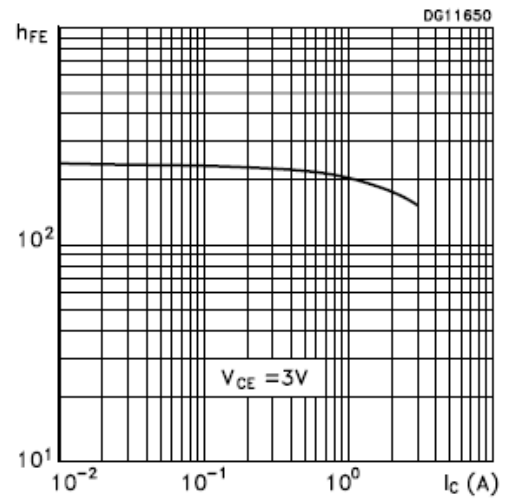
Derating Curve



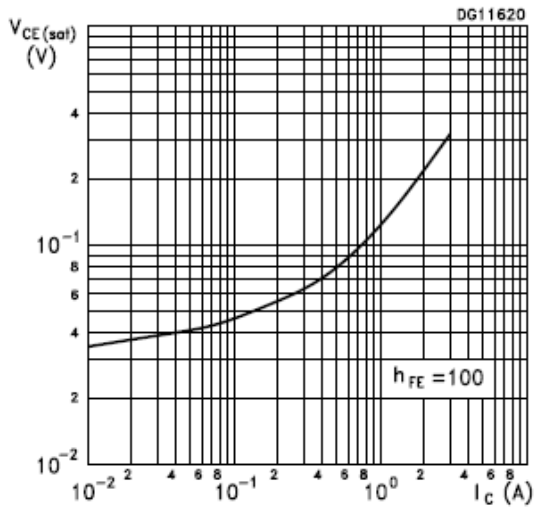
DC Current Gain



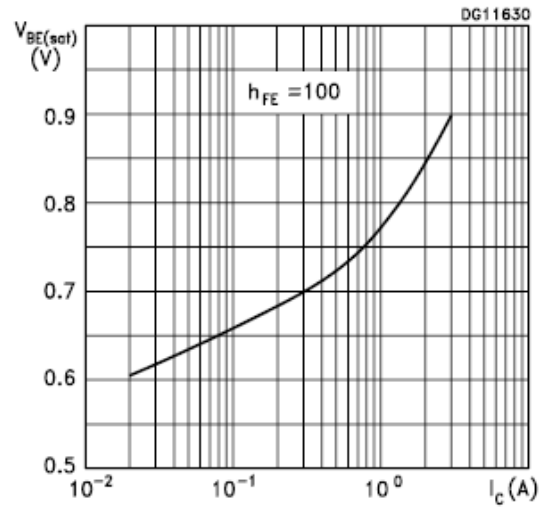
DC Current Gain



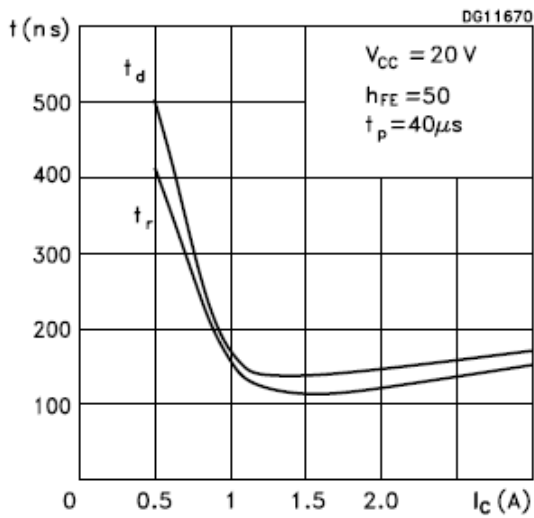
Collector-Emitter Saturation Voltage



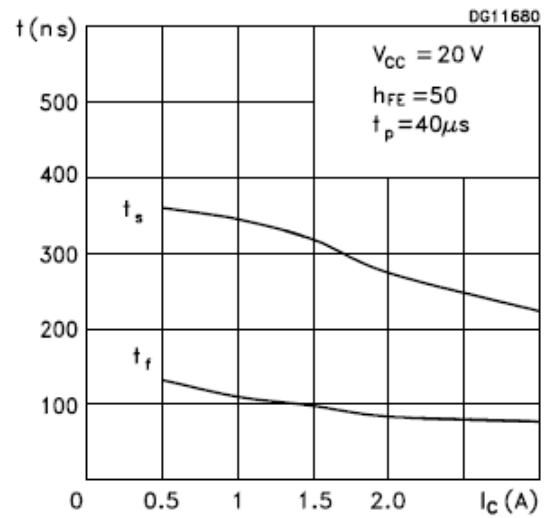
Base-Emitter Saturation Voltage



Switching Times Resistive Load

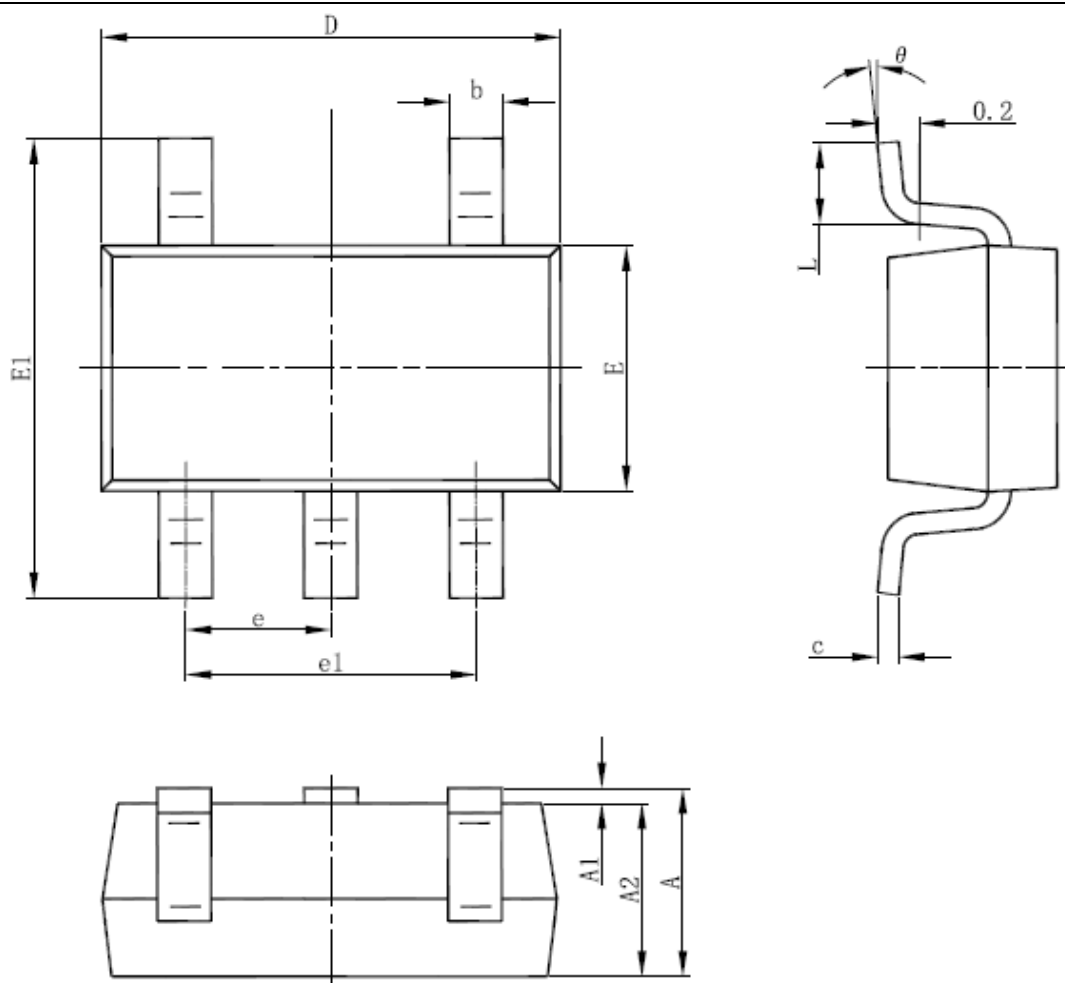


Switching Times Resistive Load



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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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