

VS818B TRANSISTOR (PNP)

DESCRIPTIONS

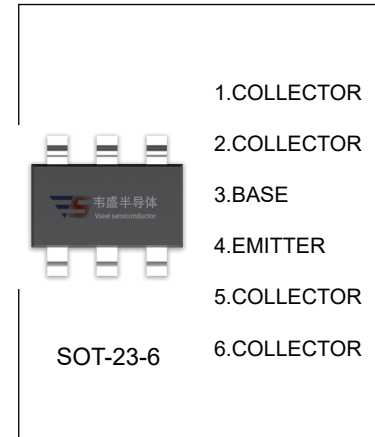
The device is manufactured in low voltage PNP Planar Technology with "Base Island" layout. The resulting Transistor shows exceptional high gain performance coupled with very low saturation voltage.

FEATURE

Very low collector to emitter saturation voltage

APPLICATIONS

- Power management in portable equipments
- Switching regulator in battery charge applications



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

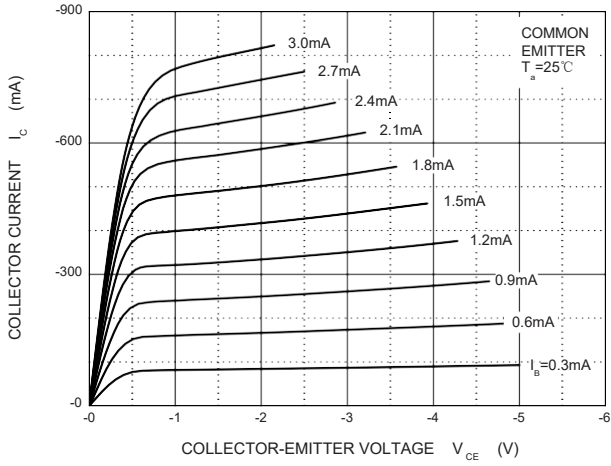
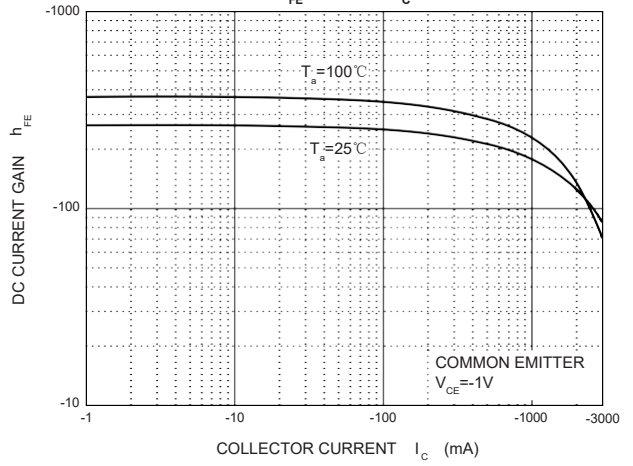
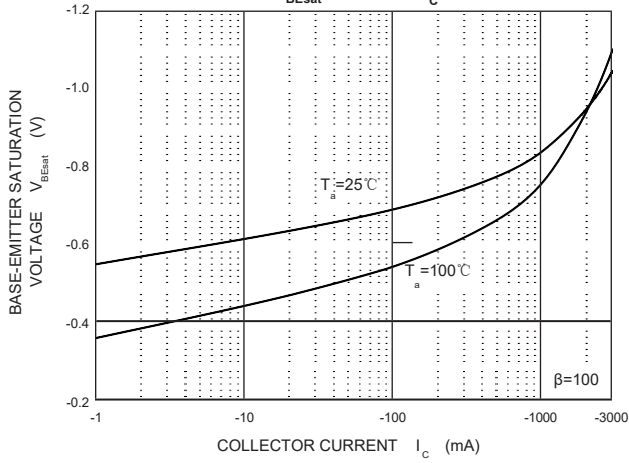
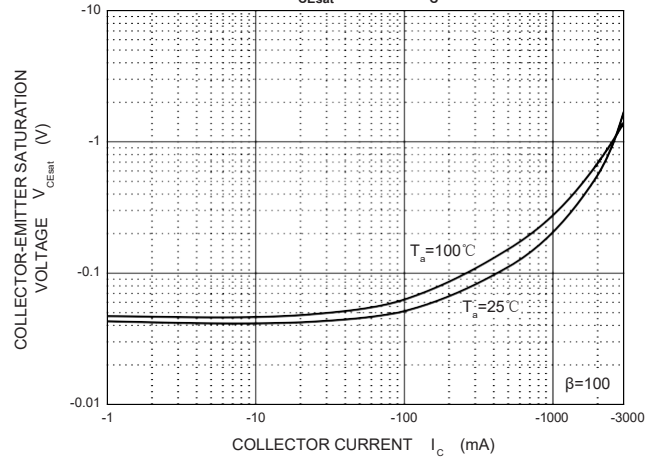
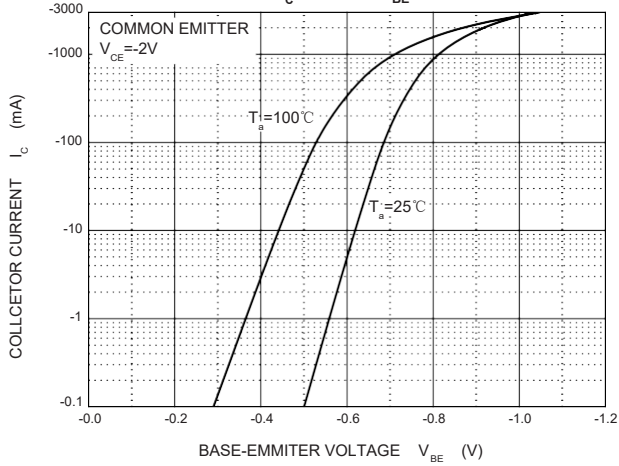
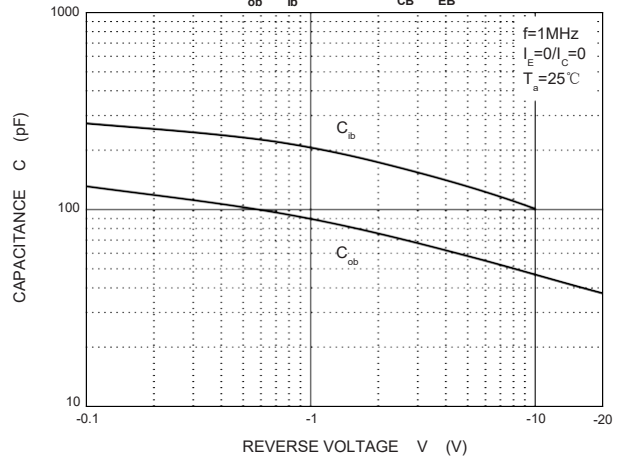
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-30	V
V_{CEO}	Collector-Emitter Voltage	-30	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_c	Collector Current -Continuous	-3	A
P_C	Collector Dissipation	0.35	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	357	$^{\circ}\text{C}/\text{W}$
P_{tot}	Total Dissipation at $T_c = 25^{\circ}\text{C}$	1.2	W
$R_{\theta JC}$	Thermal Resistance from Junction to case (note 1)	104.2	$^{\circ}\text{C}/\text{W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

Note 1: Package mounted on FR4 pcb 25mm x 25mm.

T_a=25 °C unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0$	-30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=-10mA, I_B=0$	-30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu A, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-30V, I_E=0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5V, I_C=0$			-0.1	μA
DC current gain	h_{FE}^*	$V_{CE}=-1V, I_C=-0.5A$	100			
		$V_{CE}=-3V, I_C=-2.5A$	100			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=-0.5A, I_B=-5mA$			-0.15	V
		$I_C=-1.2A, I_B=-12mA$			-0.45	V
		$I_C=-2A, I_B=-20mA$			-0.8	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C=-0.5A, I_B=-5mA$			-1.1	V
		$I_C=-1.2A, I_B=-12mA$			-1.1	V
		$I_C=-2A, I_B=-20mA$			-1.2	V
Base-emitter on voltage	$V_{BE(on)}^*$	$I_C=-0.5A, V_{CE}=-2V$			-1.1	V

 *Pulse test: Pulse width \leq 300us,duty cycle \leq 2.0%.

Static Characteristic

 h_{FE} — I_c

 V_{BEsat} — I_c

 V_{CEsat} — I_c

 I_c — V_{BE}

 C_{ob}/C_{ib} — V_{CB}/V_{EB}

 P_c — T_a
