

## SOT-23-6L Plastic-Encapsulate Transistors

### CJ818B TRANSISTOR (PNP)

#### DESCRIPTIONS

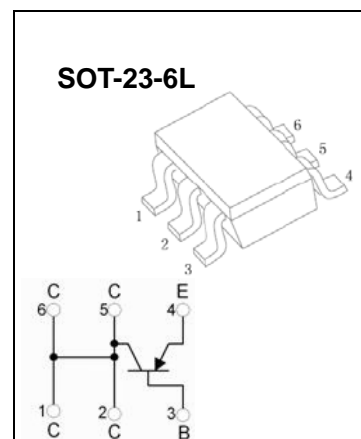
The device is manufactured in low voltage PNP Planar Technology with “Base Island” layout. The resulting Transistor shows exceptional high gain performance coupled with very low saturation voltage.

#### FEATURE

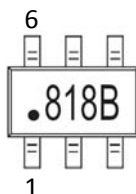
Very low collector to emitter saturation voltage

#### APPLICATIONS

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



#### MARKING:



#### 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	$^{\circ}\text{C}/\text{W}$
$T_J$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^{\circ}\text{C}$

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

**ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$  unless otherwise specified)**

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

\*Pulse test: Pulse width  $\leq 300\mu\text{s}$ , duty cycle  $\leq 2.0\%$ .

Static Characteristic

