

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

**CJL818C TRANSISTOR (PNP)**

**DESCRIPTIONS**

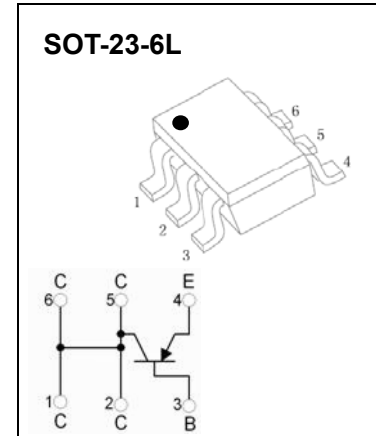
The device is manufactured in low voltage PNP Planar Technology with "Base Island" layout. The resulting transistor shows exceptional high gain performance coupled with very low saturation voltage.

**FEATURE**

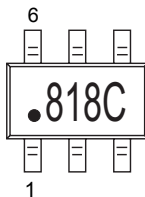
- Very low collector to emitter saturation voltage

**APPLICATIONS**

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



**MARKING:**



**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	-30	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-30	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-2	A
I <sub>CM</sub>	Collector Current -Pulsed	-3	A
P <sub>C</sub>	Collector Power Dissipation	0.35	W
R <sub>θJA</sub>	Thermal Resistance from Junction to Ambient	357	°C/W
P <sub>tot</sub>	Total Dissipation at T <sub>c</sub> = 25°C (note 1)	1	W
R <sub>θJC</sub>	Thermal Resistance from Junction to Case (note 1)	125	°C/W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~+150	°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		300	
		$V_{CE} = -3\text{V}, I_C = -2\text{A}$	80			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C = -0.5\text{A}, I_B = -10\text{mA}$			-0.18	V
		$I_C = -2\text{A}, I_B = -200\text{mA}$			-0.35	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	V

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