

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

### CJL818C TRANSISTOR (PNP)

#### DESCRIPTIONS

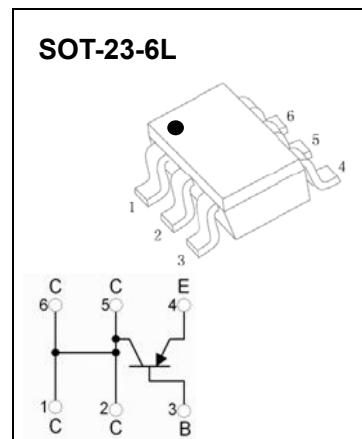
The device is manufactured in low voltage PNP Planar Technology with "Base Island" layout. The resulting transistor shows exceptional high gain performance coupled with very low saturation voltage.

#### FEATURE

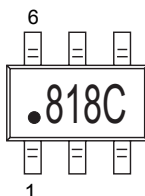
- Very low collector to emitter saturation voltage

#### APPLICATIONS

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



#### MARKING:



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

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	-30	V
$V_{CEO}$	Collector-Emitter Voltage	-30	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-2	A
$I_{CM}$	Collector Current -Pulsed	-3	A
$P_C$	Collector Power Dissipation	0.35	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	357	$^{\circ}\text{C/W}$
$P_{tot}$	Total Dissipation at $T_c = 25^{\circ}\text{C}$ (note 1)	1	W
$R_{\theta JC}$	Thermal Resistance from Junction to Case (note 1)	125	$^{\circ}\text{C/W}$
$T_J$	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<sub>a</sub> =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	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-5V, I_C=0$			-0.1	$\mu A$
DC current gain	$h_{FE}^*$	$V_{CE}=-1V, I_C=-0.5A$	100		300	
		$V_{CE}=-3V, I_C=-2A$	80			
Collector-emitter saturation voltage	$V_{CE(sat)}^*$	$I_C=-0.5A, I_B=-10mA$			-0.18	V
		$I_C=-2A, I_B=-200mA$			-0.35	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	V

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