

Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

DESCRIPTIONS

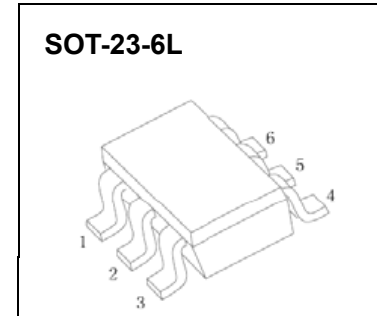
The device is manufactured in low voltage PNP Planar Technology with "Base Island" layout. The resulting transistor shows exceptional high gain performance coupled with very low saturation voltage.

FEATURE

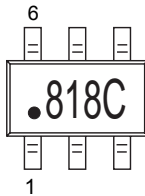
- Very low collector to emitter saturation voltage

APPLICATIONS

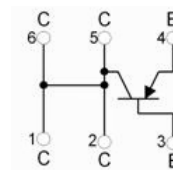
- Power management in portable equipments
- Switching regulator in battery charge applications



MARKING:



Equivalent Circuit



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	$^{\circ}\text{C}/\text{W}$
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	$^{\circ}\text{C}/\text{W}$
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

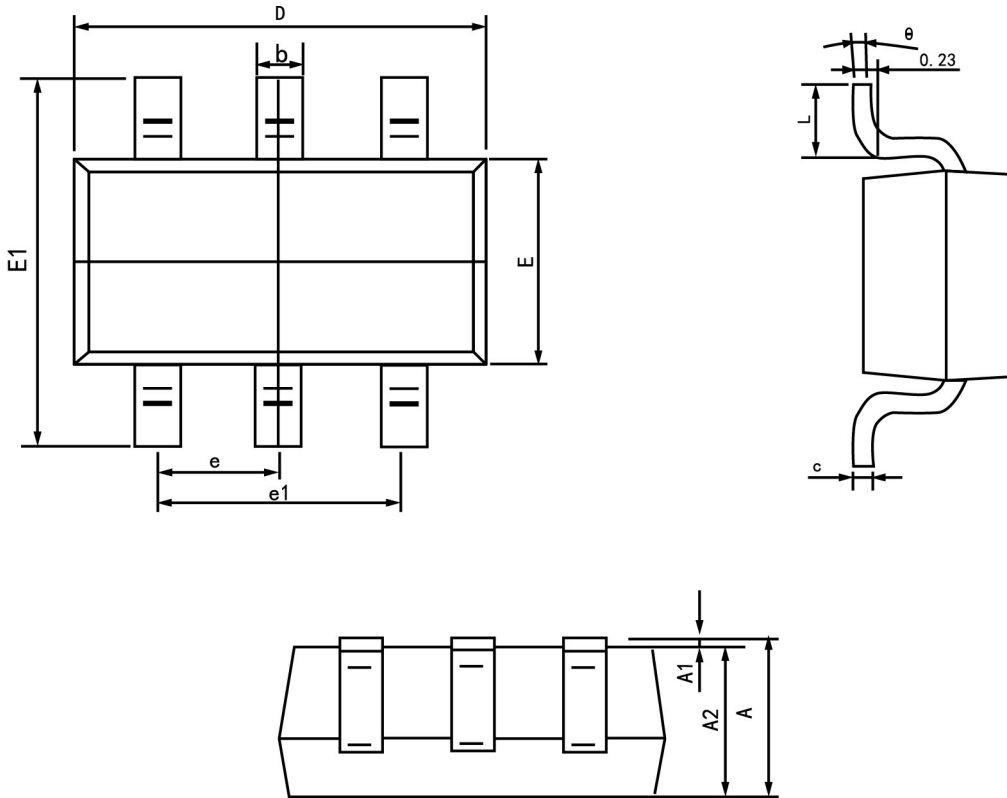
$T_a=25^\circ\text{C}$ unless otherwise specified

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	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$			-0.1	μA
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 $\leq 2.0\%$.



SOT-23-6L Package outline dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.300	0.500
c	0.100	0.200
D	2.820	3.020
E	1.500	1.700
E1	2.650	2.950
e	0.950 (Basic)	
e1	1.8	2.000
L	0.300	0.600
θ	0°	8°