

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

### CJL818C TRANSISTOR (PNP)

#### DESCRIPTIONS

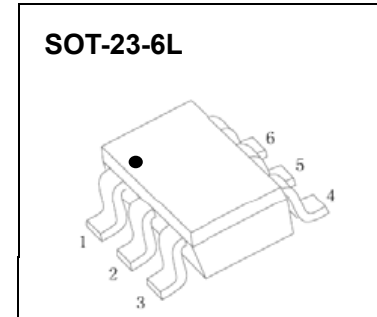
The device is manufactured in low voltage PNP Planar Technology with "Base Island" layout. The resulting transistor shows exceptional high gain performance coupled with very low saturation voltage.

#### FEATURE

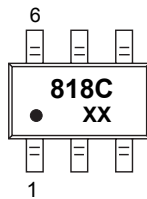
- Very low collector to emitter saturation voltage

#### APPLICATIONS

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

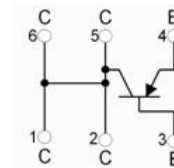


#### MARKING:



818C=Device code  
Solid point=Pin1 positioning point  
XX=Date Code

#### 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	$^{\circ}\text{C/W}$
$P_{tot}$	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	$^{\circ}\text{C/W}$
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

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

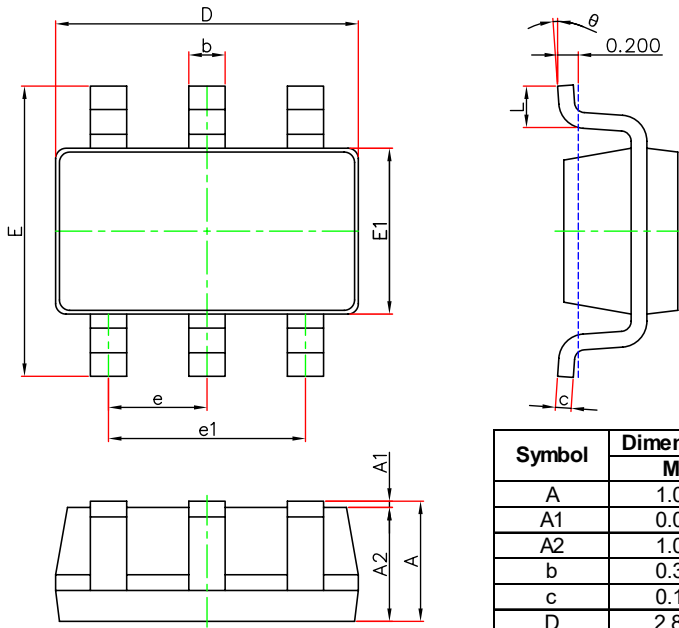
## ELECTRICAL CHARACTERISTICS

$T_a=25\text{ }^\circ\text{C}$  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

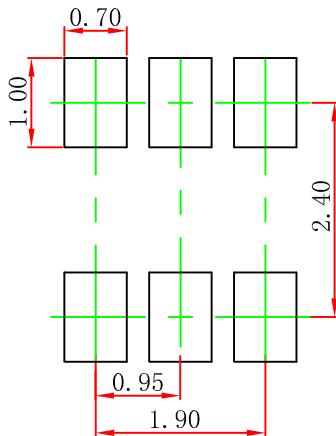
\*Pulse test: Pulse width $\leq$ 300us,duty cycle $\leq$ 2.0%.

## SOT-23-6L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
$\theta$	0°	8°	0°	8°

## SOT-23-6L Suggested Pad Layout



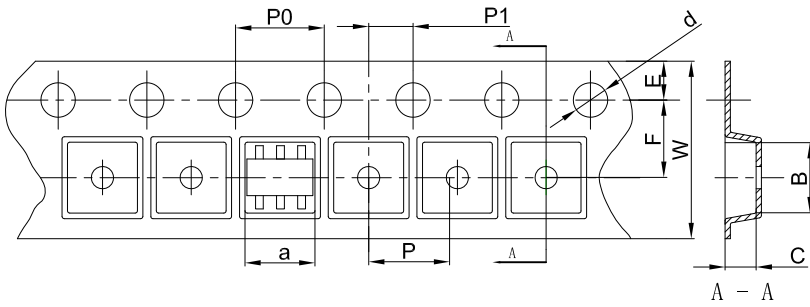
- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance:  $\pm 0.05$  mm.
  3. The pad layout is for reference purposes only.

### NOTICE

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# SOT-23-6L Tape and Reel

## SOT-23-6L Embossed Carrier Tape

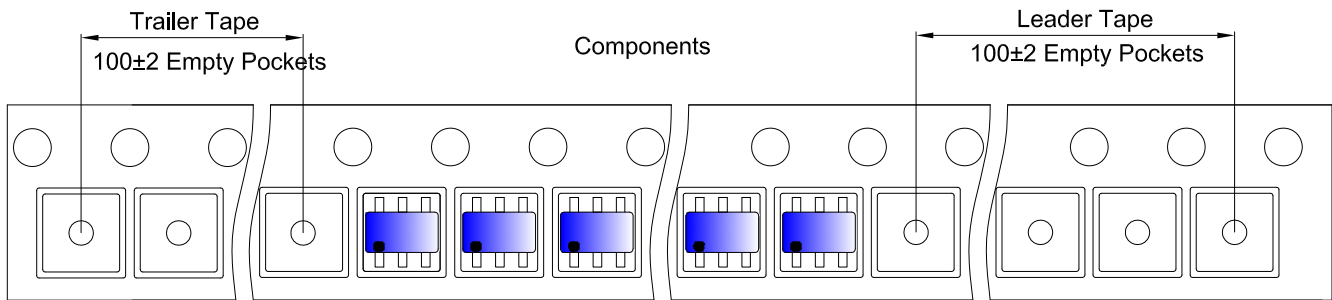


### Packaging Description:

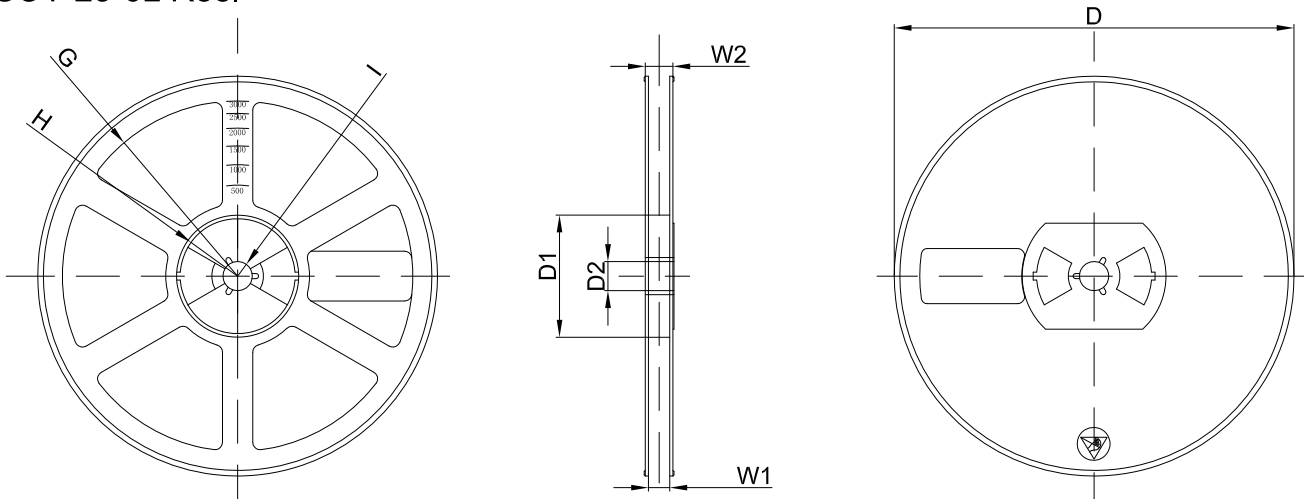
SOT-23-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 18.0cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOT-23-6L	3.23	3.17	1.37	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

## SOT-23-6L Tape Leader and Trailer



## SOT-23-6L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø180.00	60.00	13.00	R78.00	R25.60	R6.50	9.50	13.10

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	