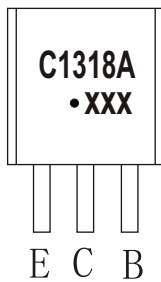


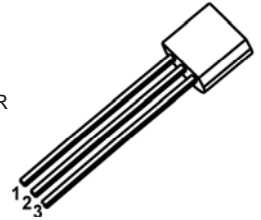
## 2SC1318A TRANSISTOR (NPN)

### MARKING

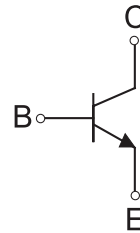


### TO-92

1. EMITTER
2. COLLECTOR
3. BASE



### Equivalent Circuit



### ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2SC1318A	TO-92	Bulk	1000pcs/Bag

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

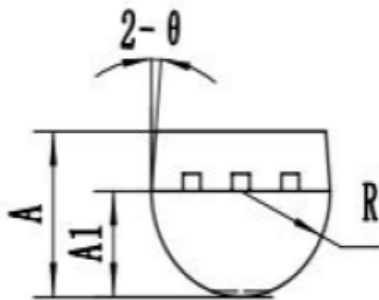
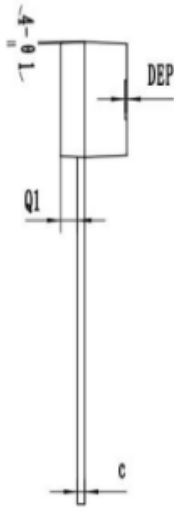
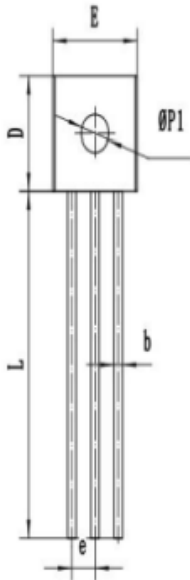
Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	80	V
V <sub>CE0</sub>	Collector-Emitter Voltage	70	V
V <sub>EB0</sub>	Emitter-Base Voltage	5	V
I <sub>c</sub>	Collector Current -Continuous	0.5	A
P <sub>D</sub>	Collector Power Dissipation	750	mW
R <sub>θJA</sub>	Thermal Resistance from Junction to Ambient	167	°C /W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55~+150	°C

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	80			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=2\text{mA}, I_B=0$	70			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=20\text{V}, I_E=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	85		340	
	$h_{FE(2)}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=300\text{mA}, I_B=30\text{mA}$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=300\text{mA}, I_B=30\text{mA}$			1.5	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=50\text{mA}, f=200\text{MHz}$		120		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		11	20	pF

**CLASSIFICATION OF  $h_{FE(1)}$**

Rank	Q	R	S
Range	85-170	120-240	170-340



SYMBOL	MM		
	MIN	NOM	MAX
*A	3.00	3.25	3.50
A1	2.20	2.30	2.40
*b	0.40	0.45	0.50
*c	0.25	0.30	0.35
*D	4.50	4.60	4.70
*E	4.50	4.60	4.70
*e	1.22	1.27	1.32
*L	14.00	14.30	14.60
R	2.20	2.30	2.40
Q1	0.85	0.90	0.95
θ	3°	5°	7°
Ø1	1°	3°	5°
ØP1	1.40	1.50	1.60
DEP	0.05	0.10	0.20
带*为检验尺寸			