

isc Silicon NPN Power Transistor**2SC9014****DESCRIPTION**

- High total power dissipation
- High hFE and good linearity
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for Switching and amplification

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	0.1	A
P_C	Collector Power Dissipation @ $T_a<50^{\circ}\text{C}$	0.45	W
J	Junction Temperature	-55~150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

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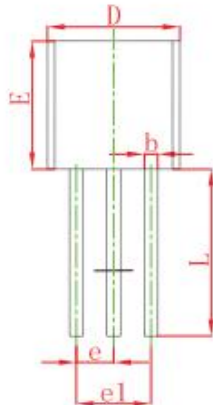
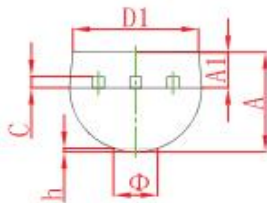
2SC9014

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{CBO}	Collector-base breakdown Voltage	$I_C=100\mu\text{A}; I_E=0$	50			V
V_{EBO}	Emitter-base breakdown Voltage	$I_E=100\mu\text{A}; I_C=0$	5			v
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100\text{mA}; I_B=5\text{mA}$			0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=100\text{mA}; I_B=5\text{mA}$			1	V
$V_{BE(on)}$	Base-Emitter on Voltage	$V_{CE}=5\text{V}; I_C=1\text{mA}$	0.58		0.7	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=50\text{V}; I_E=0$			50	nA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			50	nA
h_{FE}	DC Current Gain	$I_C=1\text{mA}; V_{CE}=5\text{V}$	60		1000	

TO-92 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

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