

isc Silicon NPN Power Transistor

2N4348

DESCRIPTION

- Excellent Safe Operating Area
- Low Collector-Emitter Saturation Voltage
- The device employs the popular JEDEC TO-3
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

APPLICATIONS

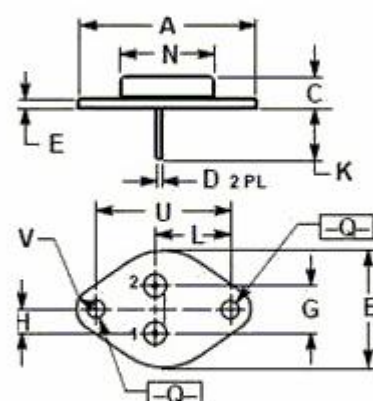
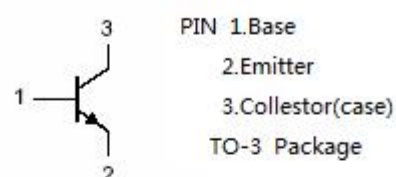
- High voltage high current power transistors

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	140	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
P_C	Collector Power Dissipation@ $T_C=25^{\circ}\text{C}$	120	W
T_J	Junction Temperature	200	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-65~200	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.46	$^{\circ}\text{C/W}$



DIM	mm	
	MIN	MAX
A		39.00
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G		10.92
H		5.46
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

isc Silicon NPN Power Transistor**2N4348****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}^*$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; I_B=0$	120		V
I_{CEO}	Collector Cutoff Current	$V_{CE}=100\text{V}; I_B=0$		200	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$		5	mA
$V_{CE(sat)-1}^*$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=500\text{mA}$		1.0	V
$V_{CE(sat)-2}^*$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=1.25\text{mA}$		2.0	V
$V_{BE(ON)-1}^*$	Base-Emitter On Voltage	$I_C=5\text{A}; V_{CE}=4\text{V}$		2.0	V
$V_{BE(ON)-2}^*$	Base-Emitter On Voltage	$I_C=10\text{A}; V_{CE}=4\text{V}$		3.0	V
h_{FE-1}^*	DC Current Gain	$I_C=5\text{A}; V_{CE}=4\text{V}$	15	60	
h_{FE-2}^*	DC Current Gain	$I_C=10\text{A}; V_{CE}=4\text{V}$	10		

*:Pulse test:Pulse width=300us,duty cycle $\leq$ 2%