

isc Silicon NPN Power Transistor

2SC2292

DESCRIPTION

- High Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V$ (Min)
- High Switching Speed

APPLICATIONS

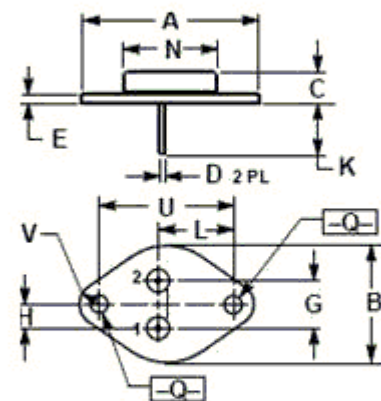
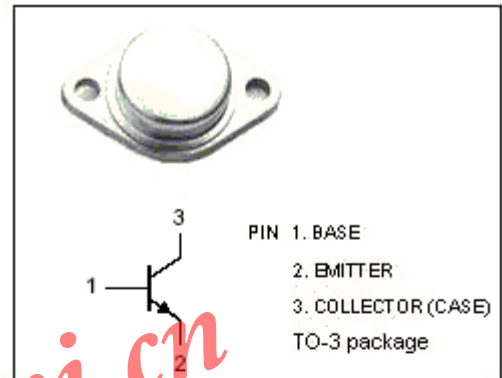
- Power switching
- Power amplification
- Power driver

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	16	A
I_B	Base Current-Continuous	4	A
I_{BM}	Base Current-Peak	8	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}C$	80	W
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.56	$^{\circ}C/W$



DIM	mm	
	MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	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

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; I_B=0$	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.4\text{A}$			0.7	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.4\text{A}$			1.5	V
h_{FE-1}	DC Current Gain	$I_C=4\text{A}; V_{CE}=2\text{V}$	15			
h_{FE-2}	DC Current Gain	$I_C=8\text{A}; V_{CE}=2\text{V}$	8			
I_{CBO}	Collector Cutoff Current	$V_{CB}=500\text{V}; I_E=0$			0.1	mA
I_{CEO}	Collector Cutoff Current	$V_{CE}=400\text{V}; I_B=0$			0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$			1.0	mA
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=10\text{V}$		20		MHz

Switching Times

t_{on}	Turn-On Time				1.0	μs
t_{stg}	Storage Time	$I_C=4\text{A}; I_{B1}=I_{B2}=0.8\text{A};$ $R_L=5\Omega; V_{BB2}=4\text{V}$			3.0	μs
t_f	Fall Time				0.7	μs