

isc Silicon NPN Power Transistor

2SC2293

DESCRIPTION

- High Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V$ (Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

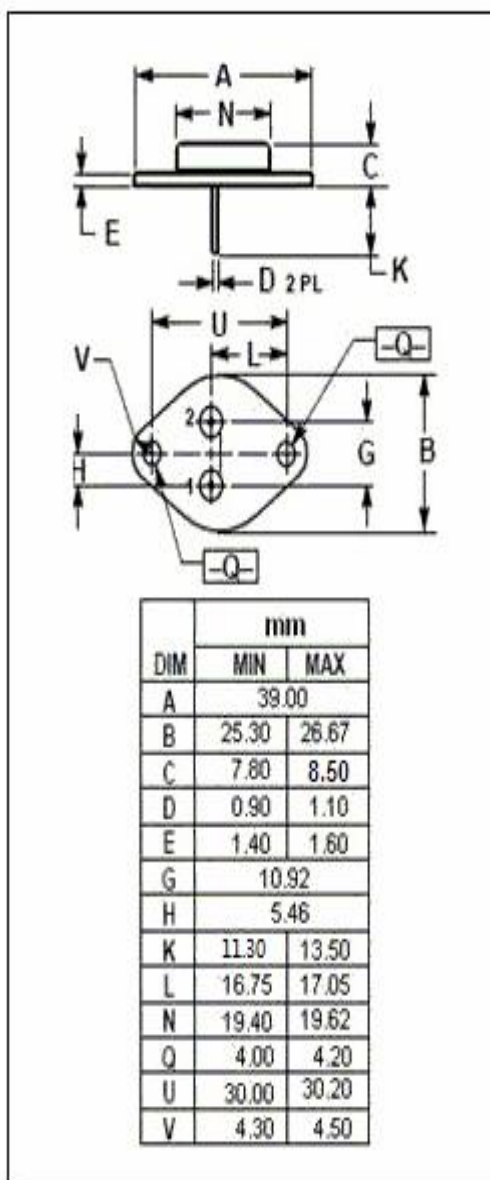
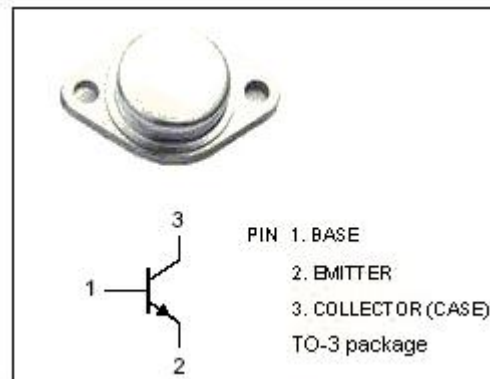
- Power switching
- Power amplification
- Power driver

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	10	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	4	A
I_{BM}	Base Current-Peak	8	A
P_C	Collector Power Dissipation @ $T_c=25^\circ C$	100	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	1.25	$^\circ C/W$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	410			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			0.7	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.5	V
h _{FE-1}	DC Current Gain	I _C = 5A; V _{CE} = 2V	15			
h _{FE-2}	DC Current Gain	I _C = 10A; V _{CE} = 2V	8			
I _{CBO}	Collector Cutoff Current	V _{CB} = 500V; I _E = 0			0.1	mA
I _{CEO}	Collector Cutoff Current	V _{CE} = 400V; I _B = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C = 0			1.0	mA
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 10V		20		MHz

Switching Times

t _{on}	Turn-On Time	I _C = 5A; I _{B1} =- I _{B2} = 1A; R _L = 5 Ω; V _{BB2} = 4V			1.0	μ s
t _{stg}	Storage Time				3.0	μ s
t _f	Fall Time				0.7	μ s

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