

isc Silicon NPN Power Transistor

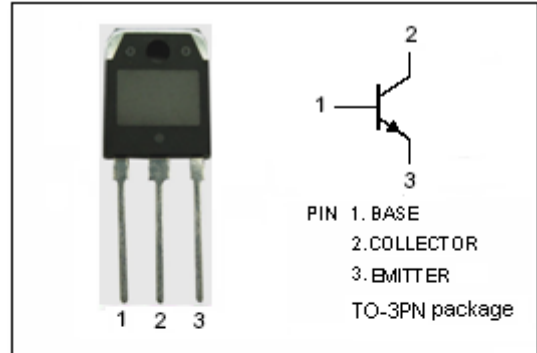
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DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 400V(\text{Min})$
- High Switching Speed
- High Reliability

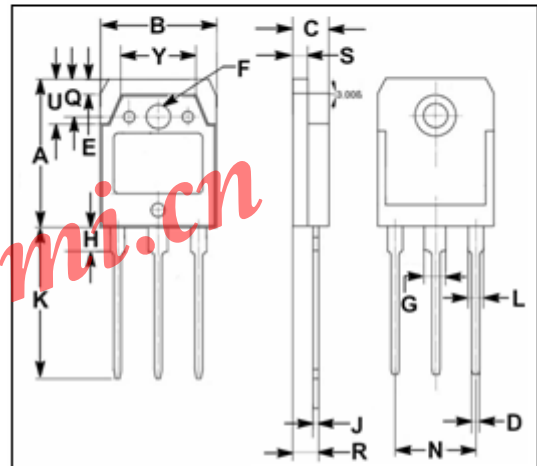
APPLICATIONS

- Switching regulators
- Ultrasonic generators
- High frequency inverters
- General purpose power amplifiers



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	450	V
V_{CEO}	Collector-Emitter Voltage	400	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base voltage	7	V
I_C	Collector Current-Continuous	5	A
I_B	Base Current-Continuous	1.5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	80	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.38	15.42
C	4.75	4.85
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.98	3.02
H	3.20	3.40
J	0.595	0.605
K	19.95	20.25
L	1.98	2.02
N	10.89	10.91
Q	4.95	5.05
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.17	$^\circ\text{C/W}$

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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA ; I _B = 0	400			V
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 1A ; I _B = 0	400			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA ; I _E = 0	450			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 0.1mA ; I _C = 0	7			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 0.4A			1.2	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2A; I _B = 0.4A			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 450V ; I _E =0			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7V; I _C =0			0.1	mA
h _{FE}	DC Current Gain	I _C = 5A; V _{CE} = 5V	10			

Switching times

t _{on}	Turn-on Time	I _C = 4A , I _{B1} = -I _{B2} = 0.8A R _L = 20 Ω ; P _W =20 μ s Duty Cycle ≤ 2%			1.0	μ s
t _{stg}	Storage Time				2.0	μ s
t _f	Fall Time				1.0	μ s