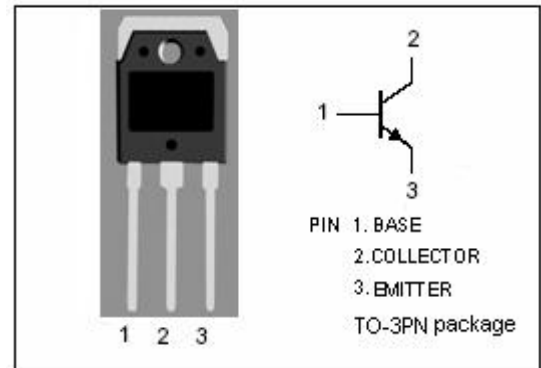


isc Silicon NPN Power Transistor
2SC3505
DESCRIPTION

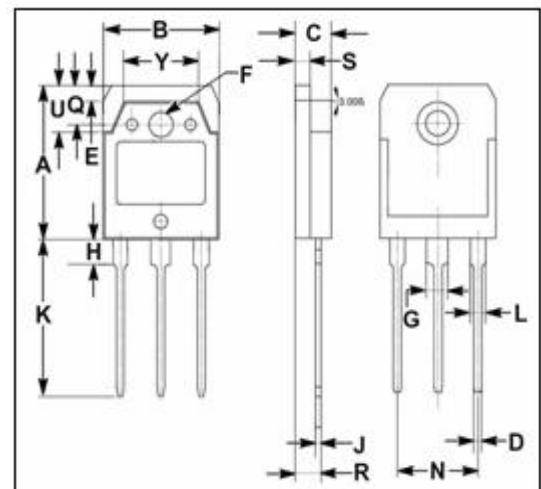
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 700V(\text{Min})$
- High Switching Speed
- High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	900	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base voltage	10	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current-Continuous	3	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	19.60	20.10
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	20.00	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.10
Y	9.90	10.10

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal Resistance, Junction to Case	1.5	$^\circ\text{C}/\text{W}$

isc Silicon NPN Power Transistor

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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	700			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	900			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 2A; I _B = 0.4A			0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 2A; I _B = 0.4A			1.2	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 900V; I _E =0			1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 10V; I _C =0			1.0	mA
h _{FE}	DC Current Gain	I _C = 2A; V _{CE} = 5V	10			

Switching times

t _{on}	Turn-on Time	I _C = 3A, I _{B1} = 0.6A; I _{B2} = 1.2A R _L = 100 Ω; P _W = 20 μ s; Duty Cycle ≤ 2%			1.0	μ s
t _{stg}	Storage Time				5.0	μ s
t _f	Fall Time				1.0	μ s

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