

Silicon NPN Power Transistors

2SC3505

DESCRIPTION

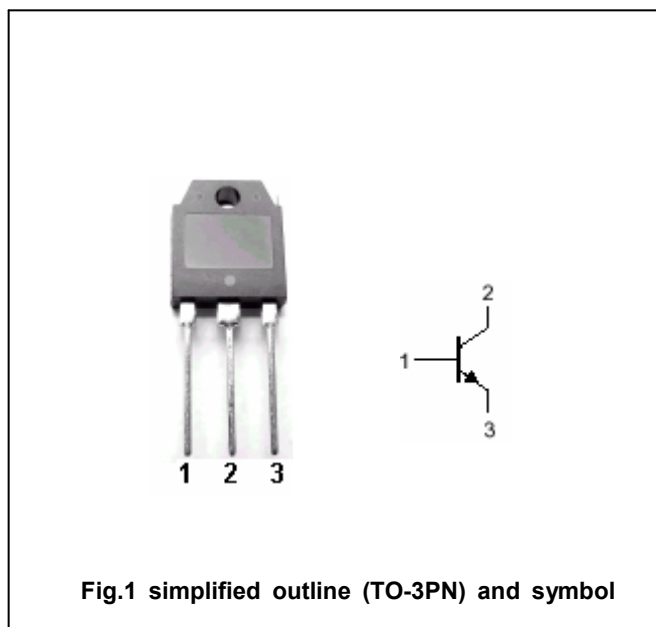
- With TO-3PN package
- High voltage ,high reliability
- High speed switching

APPLICATIONS

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

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	900	V
V_{CEO}	Collector-emitter voltage	Open base	700	V
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current		6	A
I_B	Base current		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		-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-a}$	Thermal resistance from junction to case	1.5	$^\circ\text{C}/\text{W}$

Silicon NPN Power Transistors

2SC3505

CHARACTERISTICS

Tj=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_{CEsat}	Collector-emitter saturation voltage	$I_C=2A ; I_B=0.4A$			0.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=2A ; I_B=0.4A$			1.2	V
I_{CBO}	Collector cut-off current	$V_{CB}=900V ; I_E=0$			1.0	mA
I_{EBO}	Emitter cut-off 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	$I_C=3A ; I_{B1}=0.6A ; I_{B2}=-1.2A$ $R_L=100\Omega, P_W=20\mu s$ Duty $\leq 2\%$			1.0	μs
t_{stg}	Storage time				5.0	μs
t_f	Fall time				1.0	μs

Technical drawing of a mechanical part showing outline dimensions. The drawing includes a front view on the left and a side view on the right.

Front View Dimensions:

- Overall width: 15.60
- Overall height: 42.60
- Top width: 13.50
- Top width: 10.00
- Top width: 8.00
- Top width: 30- $\phi 1.50$
- Top width: 10- $\phi 3.50$
- Top width: R0.50
- Top width: 12.00
- Top width: 26.80
- Top width: 25.00
- Top width: 22.60
- Top width: 21.10
- Top width: 19.30
- Top width: 3.25
- Top width: 2.00
- Top width: 0.00
- Top width: 2.00
- Top width: 0.60
- Top width: 10- $\phi 2.05 \pm 0.05$
- Top width: R0.50

Side View Dimensions:

- Overall width: 10.90 ± 0.01
- Overall height: 40.10
- Top width: 4.80
- Top width: 2.00 ± 0.005
- Top width: 3.00 ± 0.005
- Top width: 17.00
- Top width: 13.50
- Top width: 7.00
- Top width: 3.00
- Top width: 2.00
- Top width: 1.00
- Top width: 3.40 ± 0.05
- Top width: 0.60 ± 0.005
- Top width: $\phi 5.50$