

Silicon NPN Power Transistors

2SC4275

DESCRIPTION

- With TO-3PN package
- High voltage ,high speed
- Low collector saturation voltage
- High reliability

APPLICATIONS

- Switching regulators
- DC-DC convertor
- Solid state relay
- General purpose power amplifiers

PINNING

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

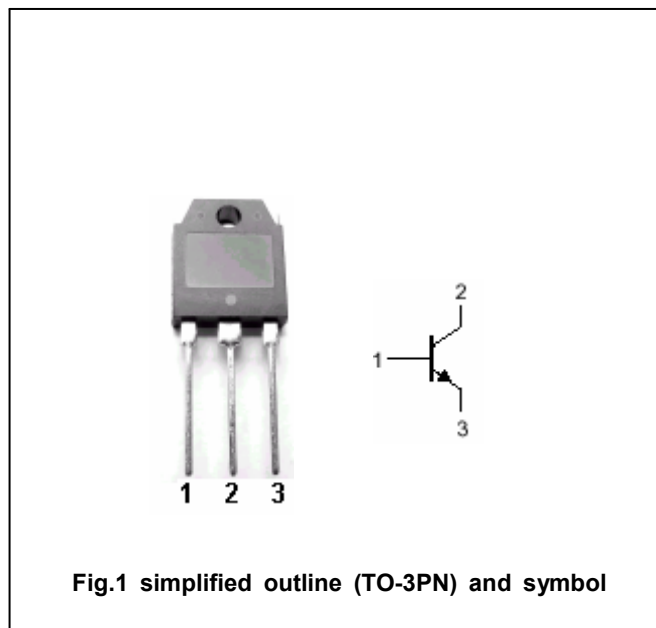


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings($T_a = \square$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	500	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current		10	A
I_B	Base current		3	A
P_C	Collector power dissipation	$T_C = 25\square$	80	W
T_j	Junction temperature		150	$\square$
T_{stg}	Storage temperature		-55~150	$\square$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-C}$	Thermal resistance junction case	1.56	$\square/W$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter sustaining voltage	$I_C=0.2A ; I_B=0$	400			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1mA ; I_E=0$	500			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1mA ; I_C=0$	10			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=4A ; I_B=0.8A$			0.8	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=4A ; I_B=0.8A$			1.2	V
I_{CBO}	Collector cut-off current	$V_{CB}=450V ; I_E=0$			100	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=10V ; I_C=0$			100	μA
h_{FE}	DC current gain	$I_C=1A ; V_{CE}=5V$	25		65	

Switching times

t_{on}	Turn-on time	$I_C=5A ; R_L=30\Omega$ $I_{B1}=0.5A ; I_{B2}=-1A$ $P_w = 20\mu s ; \text{Duty} \leq 2\%$			1.0	μs
t_s	Storage time				2.5	μs
t_f	Fall time				0.5	μs

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PACKAGE OUTLINE

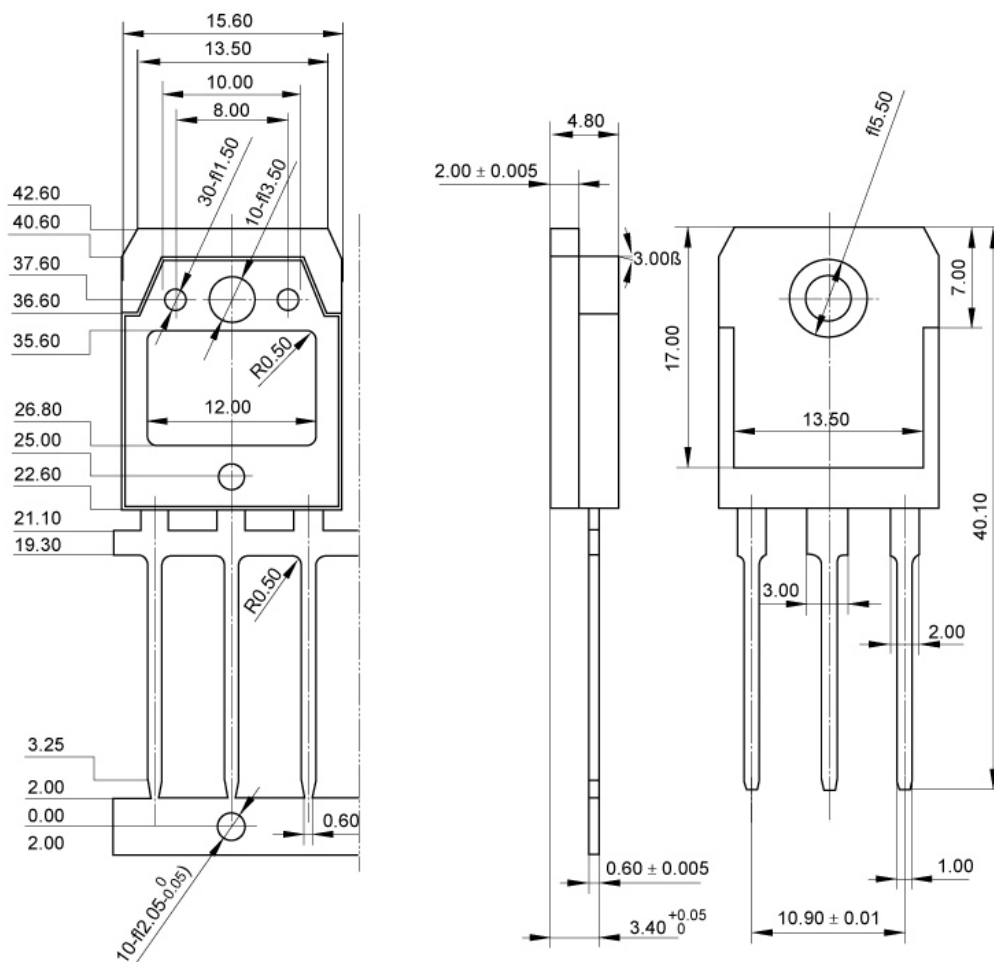


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)

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