Silicon NPN Power Transistors 2SC3320

DESCRIPTION

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

APPLICATIONS

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

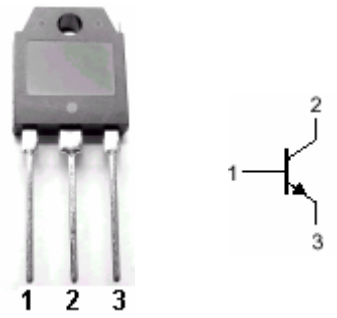

Fig.1 simplified outline (TO-3PN) and symbol

PINNING

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

Absolute maximum ratings(Ta=25□)

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	7	V
I_C	Collector current		15	A
I_B	Base current		5	A
P_C	Collector power dissipation	T_C=25□	80	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-65~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ (j\text{-}c)}$	Thermal resistance from junction to case	1.56	□/W

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CHARACTERISTICS

Tj=25□ 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
$V_{(BR)CBO}$	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	7			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=6A; I_B=1.2A			1.0	V
V_{BEsat}	Base-emitter saturation voltage	I_C=6A ;I_B=1.2A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=500V; I_E=0			1.0	mA
I_{EBO}	Emitter cut-off current	V_{EB}=7V; I_C=0			1.0	mA
h_{FE}	DC current gain	I_C=6A ; V_{CE}=5V	10			
Switching times resistive load						
t_{on}	Turn-on time	I_C=7.5A I_{B1}=1.5A I_{B2}=-3A R_L=20Ω P_W=20μs;Duty=<2%			0.5	μs
t_s	Storage time				1.5	μs
t_f	Fall time				0.15	μs

PACKAGE OUTLINE

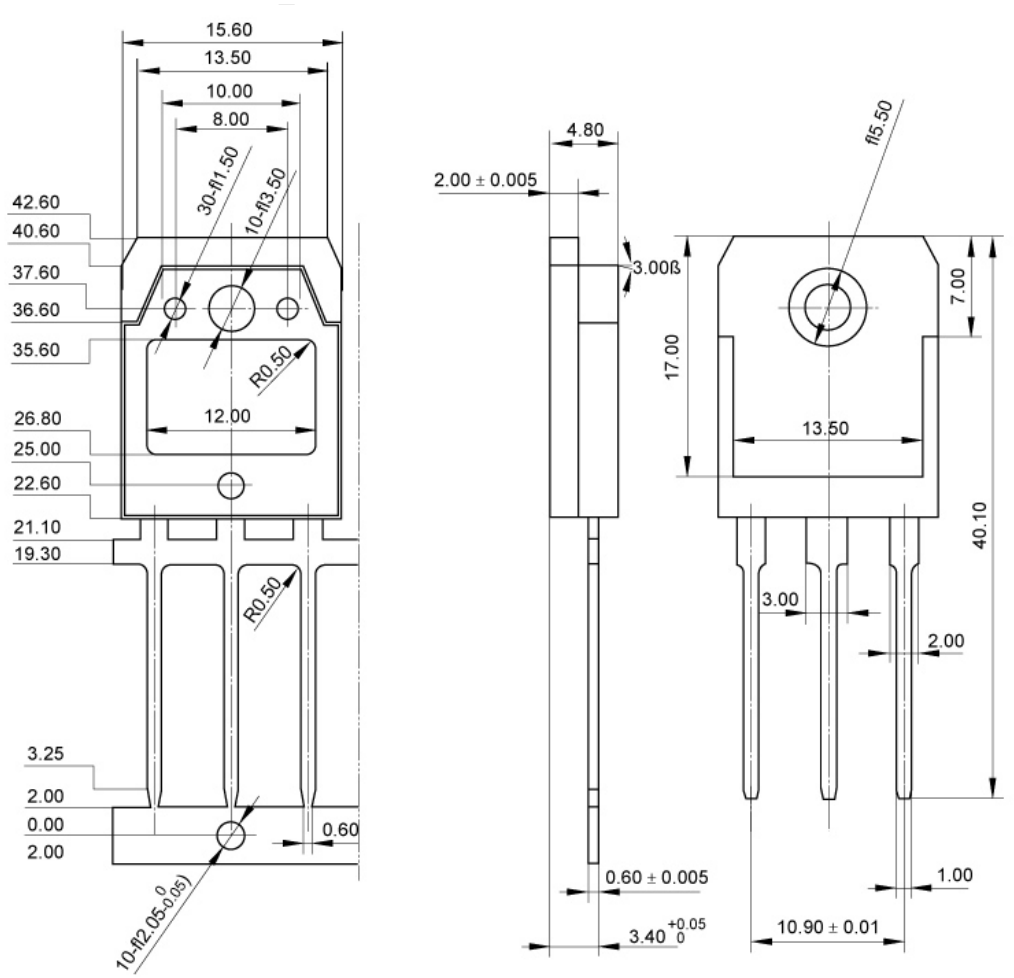

Fig.2 outline dimensions(unindicated tolerance:±0.10 mm)

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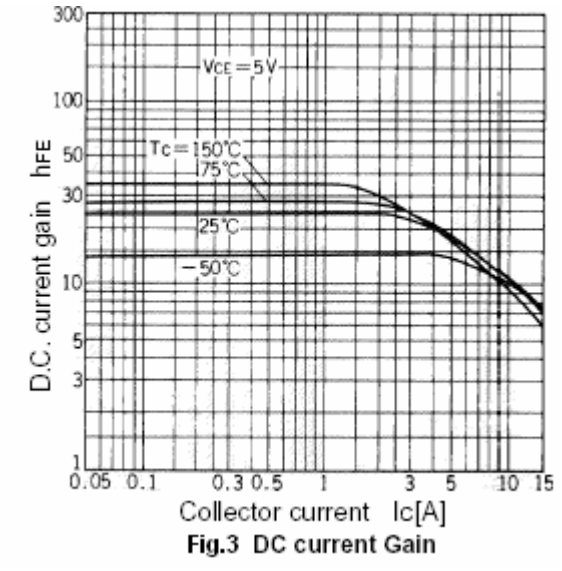

Fig.3 DC current Gain

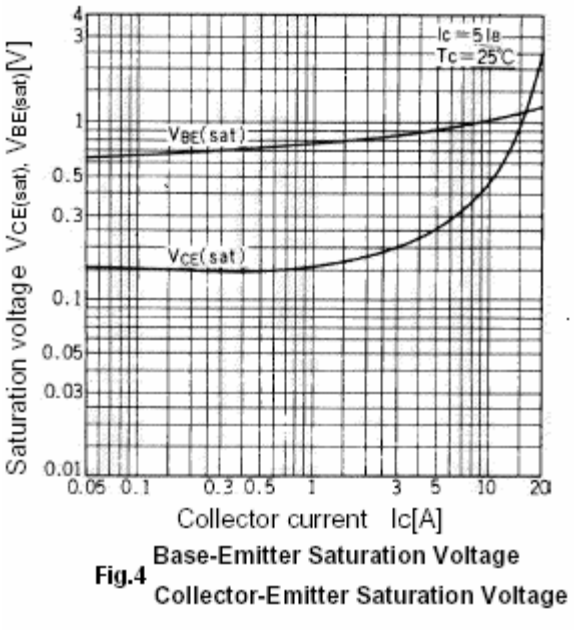

Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

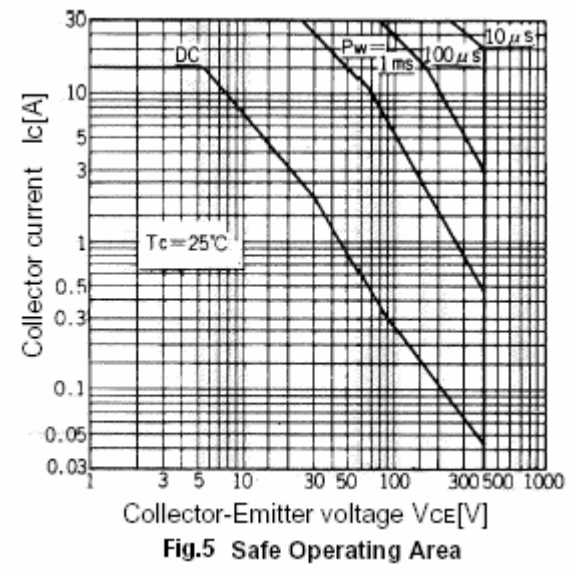

Fig.5 Safe Operating Area