Silicon NPN Power Transistors 2SC4538

DESCRIPTION

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

APPLICATIONS

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

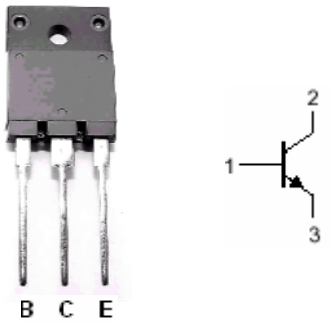

Fig.1 simplified outline (TO-3PML) and symbol

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

Absolute maximum ratings(Tc=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	900	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current		5	A
I_B	Base current		3	A
P_C	Collector power dissipation	T_C=25□	80	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}C}$	Thermal resistance junction case	1.5	□/W

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=1mA; I_E=0	900			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA; I_B=0	800			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=1mA; I_C=0	10			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=2A; I_B=0.4A			1.0	V
V_{BEsat}	Base-emitter saturation voltage	I_C=2A; I_B=0.4A			1.5	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;R_L=100Ω I_{B1}=0.6A; I_{B2}=-1.2A Pw = 20μs; Duty≤2%			1.0	μs
t_{stg}	Storage time				4.0	μs
t_f	Fall time				0.8	μs

PACKAGE OUTLINE

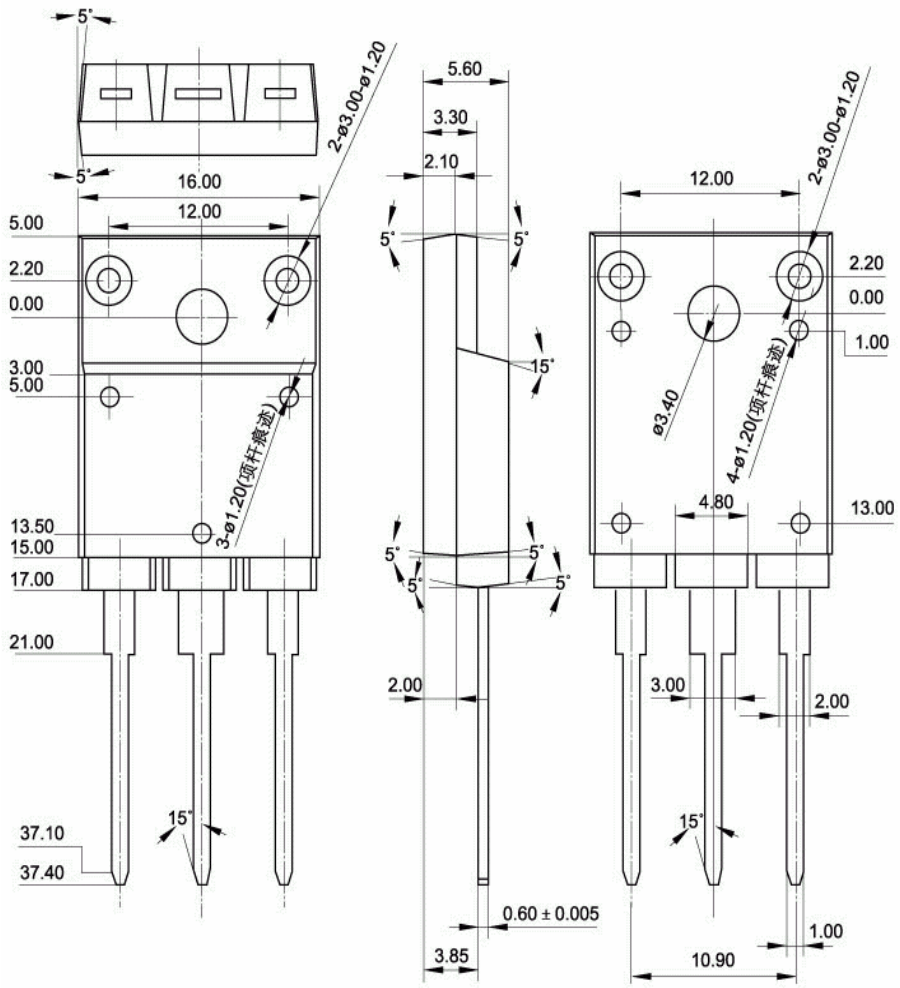

Fig.2 Outline dimensions

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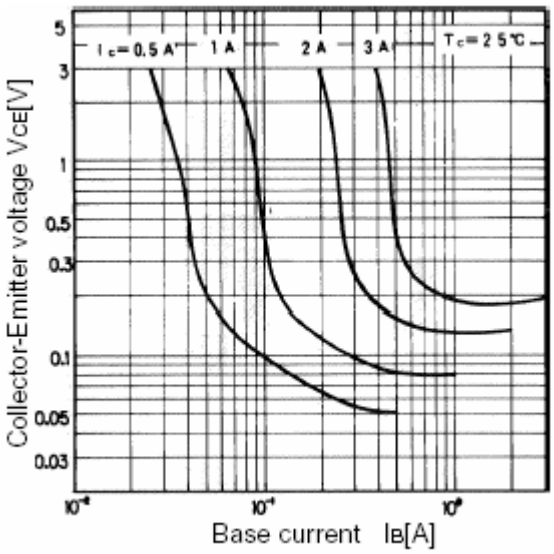

Fig.3 Static Characteristic

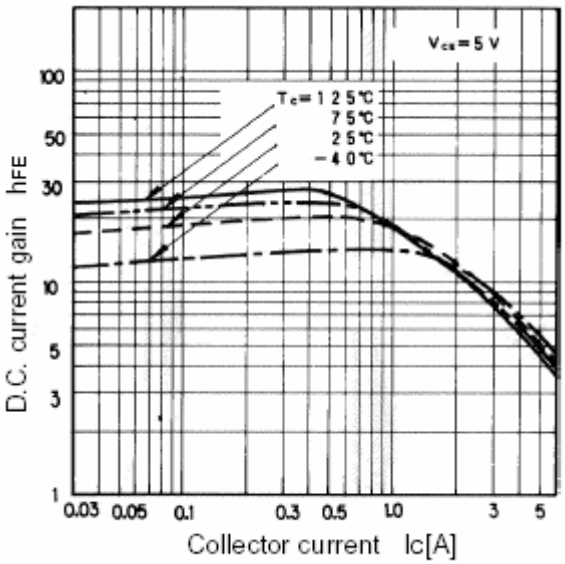

Fig.4 DC current Gain

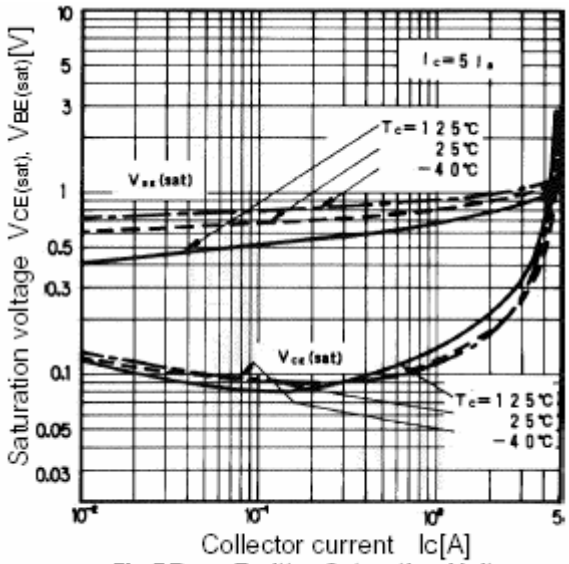

Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

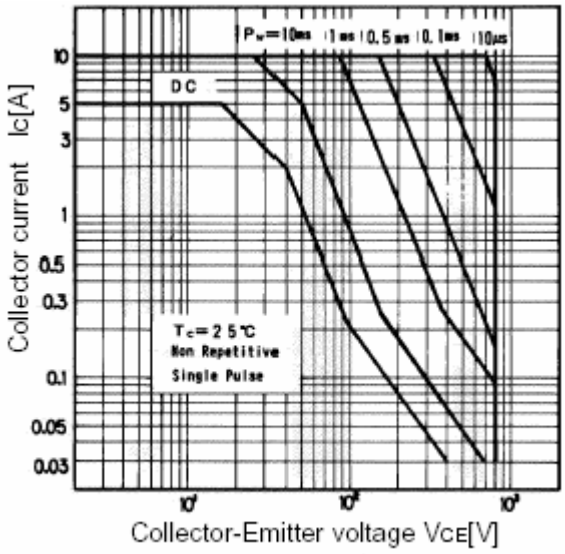

Fig.6 Safe Operating Area