Silicon NPN Power Transistors 2SC4427

DESCRIPTION

·With TO-3PML package
·High breakdown voltage, high reliability.
·Fast switching speed.
·Wide area of safe operation

APPLICATIONS

·For switching regulator applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

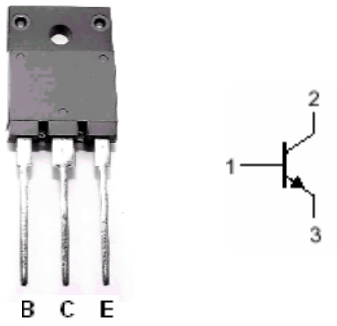

Fig.1 simplified outline (TO-3PML) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1100	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		4.5	A
I_{CM}	Collector current-peak	PW≤300μs, duty cycle≤10%	15	A
I_B	Base current		2	A
P_C	Collector power dissipation	T_C=25□	50	W
		T_a=25□	3	
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

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	1100			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=5mA; R_{BE}=∞	800			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=1mA; I_C=0	7			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=2A;I_B=0.4A			2.0	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}=800V; I_E=0			10	μA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			10	μA
h_{FE-1}	DC current gain	I_C=0.3A ; V_{CE}=5V	10		40	
h_{FE-2}	DC current gain	I_C=1.5A ; V_{CE}=5V	8			
f_T	Transition frequency	I_C=0.3A ; V_{CE}=10V		15		MHz
C_{OB}	Output capacitance	V_{CB}=10V;f=1MHz		90		pF
Switching times						
t_{on}	Turn-on time	I_C=3A;R_L=133Ω I_{B1}=0.6A; I_{B2}=-1.2A V_{CC}=400V			0.5	μs
t_{stg}	Storage time				3.0	μs
t_f	Fall time				0.3	μs

◆ **h_{FE-1} classifications**

K	L	M
10-20	15-30	20-40

PACKAGE OUTLINE

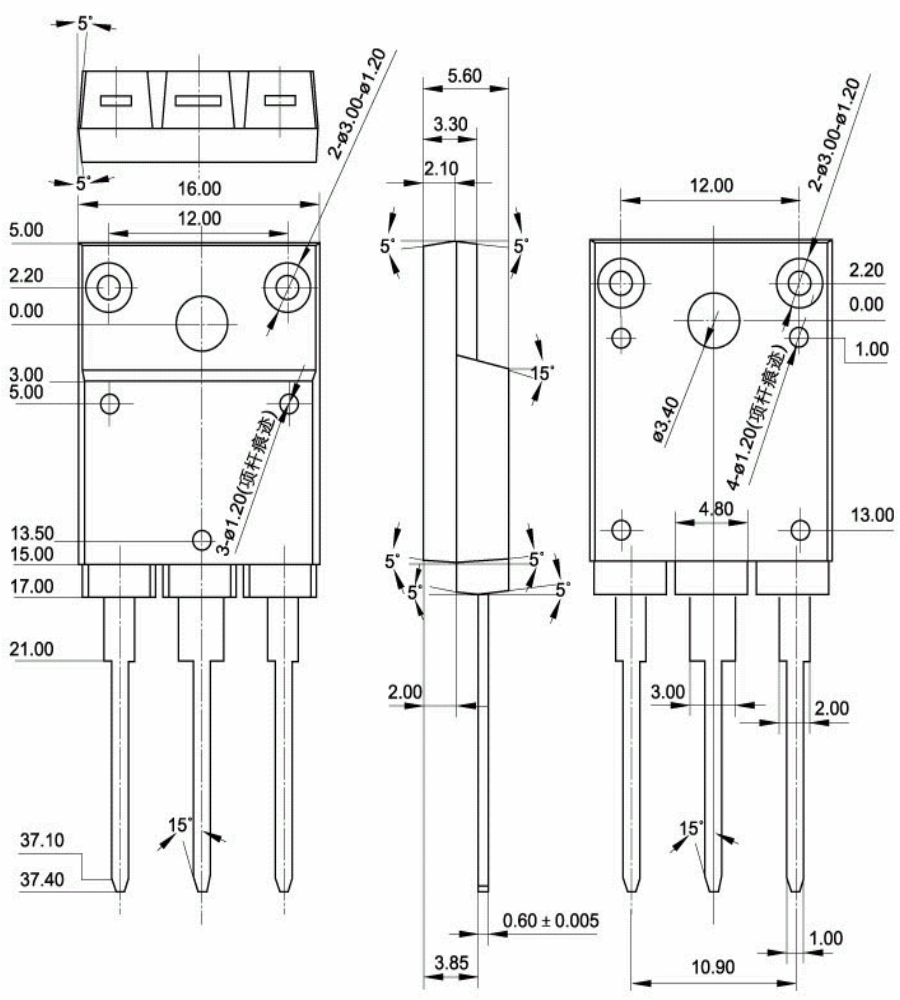

Fig.2 Outline dimensions

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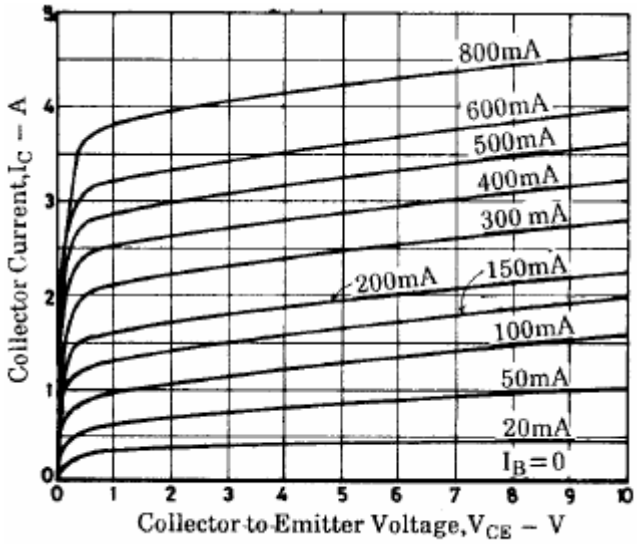

Fig.3 Static Characteristic

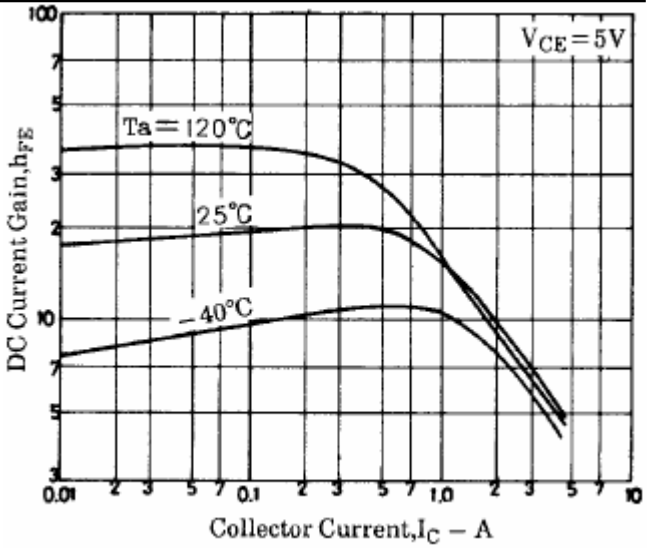

Fig.4 DC current Gain

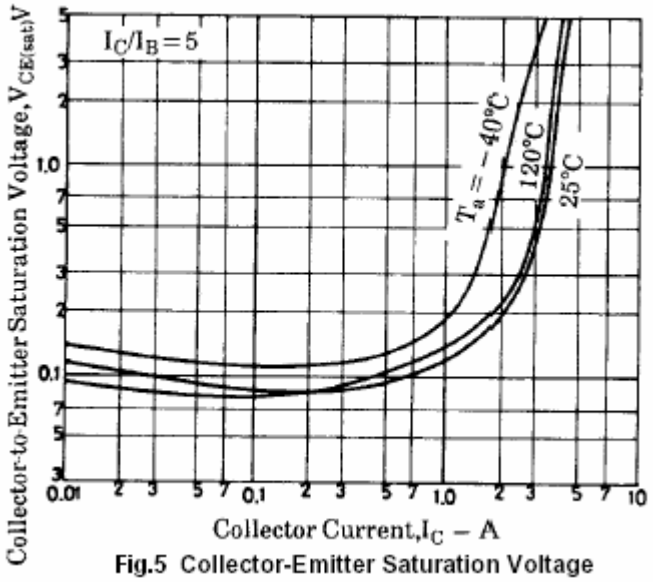

Fig.5 Collector-Emitter Saturation Voltage

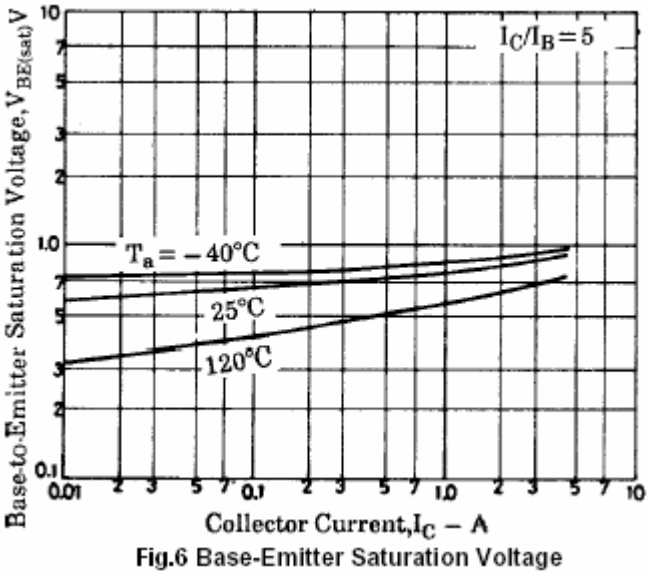

Fig.6 Base-Emitter Saturation Voltage

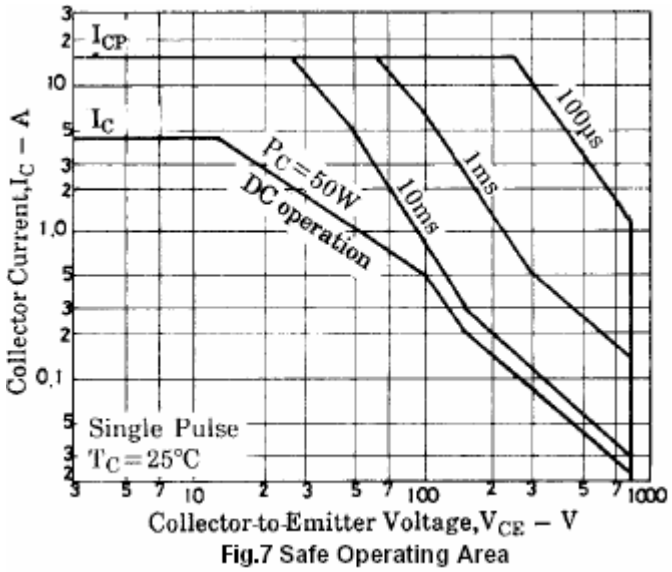

Fig.7 Safe Operating Area