Silicon NPN Power Transistors 2SC4429

DESCRIPTION

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

APPLICATIONS

·Switching regulator applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

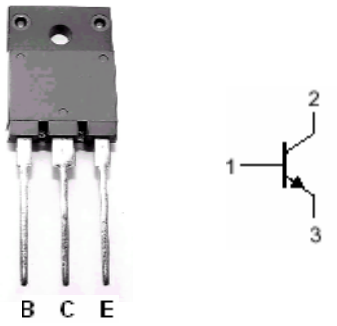


Fig.1 simplified outline (TO-3PML) and symbol

Aabsolute 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		8	A
I_{CM}	Collector current-peak		25	A
I_B	Base current		4	A
P_C	Collector power dissipation	T_C=25□	60	W
			3	
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

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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=4A;I_B=0.8A			2.0	V
V_{BEsat}	Base-emitter saturation voltage	I_C=4A;I_B=0.8A			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=0.6A ; V_{CE}=5V	10		40	
h_{FE-2}	DC current gain	I_C=3A ; V_{CE}=5V	8			
f_T	Transition frequency	I_C=0.6A ; V_{CE}=10V		15		MHz
C_{OB}	Output capacitance	V_{CB}=10V;f=1MHz		155		pF
Switching times						
t_{on}	Turn-on time	I_C=6A;R_L=66.7Ω I_{B1}=1.2A;- I_{B2}=2.4A 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

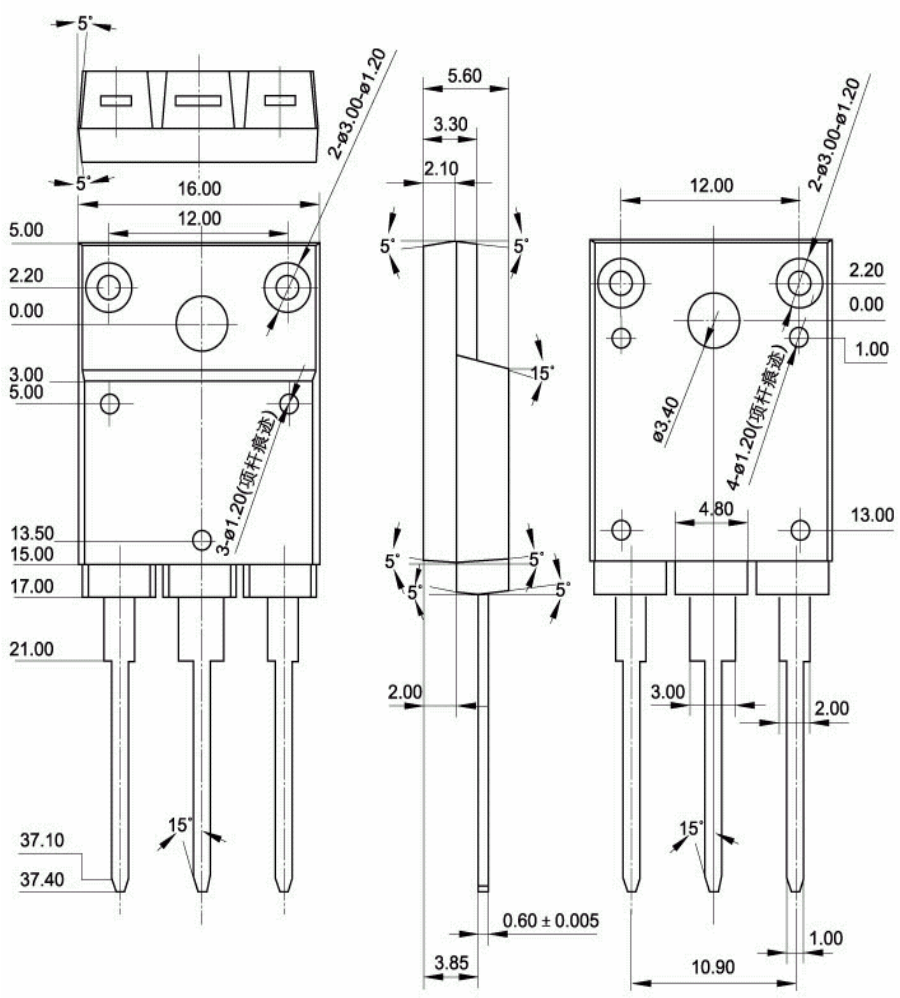


Fig.2 Outline dimensions

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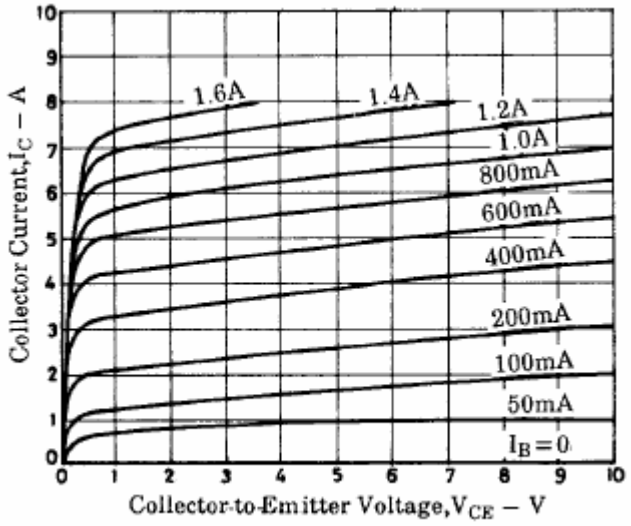


Fig.3 Static Characteristic

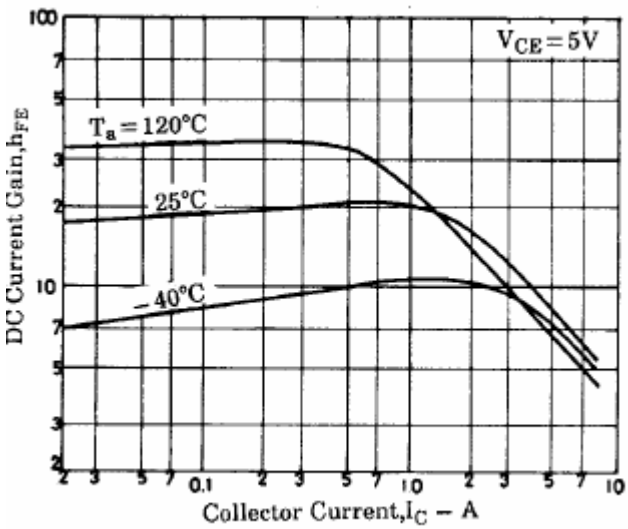


Fig.4 DC current Gain

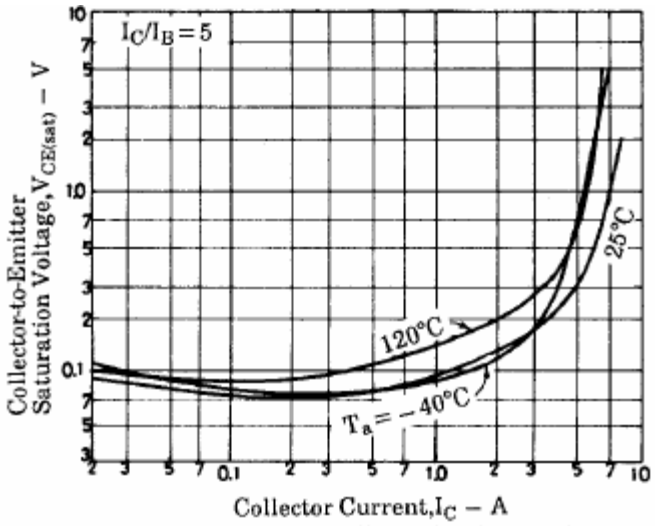


Fig.5 Collector-Emitter Saturation Voltage

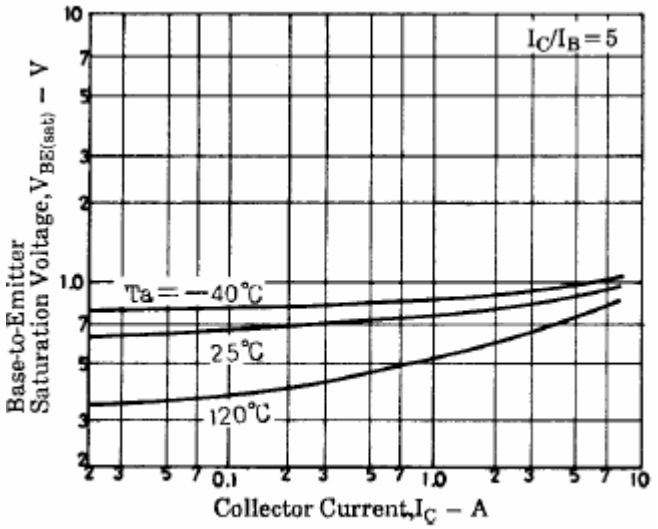


Fig.6 Base-Emitter Saturation Voltage

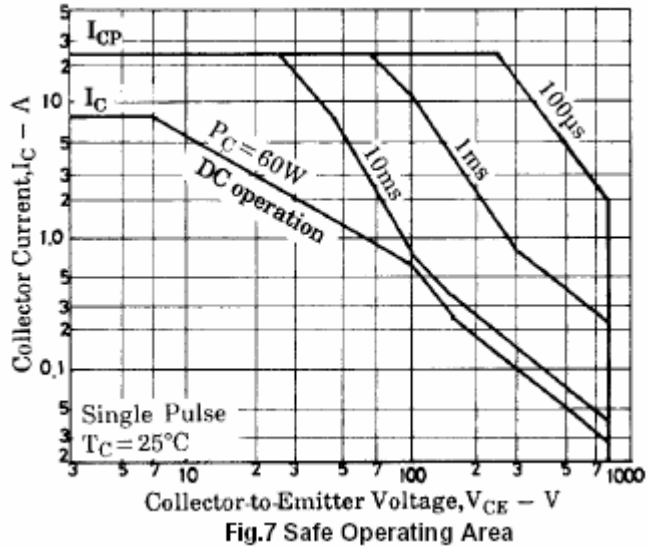


Fig.7 Safe Operating Area