DESCRIPTION

- ·With TO-220Fa package
- ·Complement to type 2SA1452
- ·Low collector saturation voltage
- ·High speed switching time

APPLICATIONS

- ·High current switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

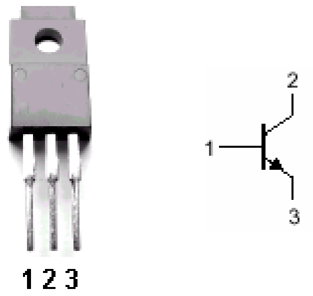

Fig.1 simplified outline (TO-220Fa) and symbol

Absolute maximum ratings (Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	80	V
V_{CEO}	Collector-emitter voltage	Open base	80	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		12	A
I_B	Base current		2	A
P_C	Collector dissipation	T_C=25□	30	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

CHARACTERISTICS

T_j=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=50mA ;I_B=0	80			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=6A;I_B=0.3A		0.2	0.4	V
V_{BEsat}	Base-emitter saturation voltage	I_C=6A;I_B=0.3A		0.9	1.2	V
I_{CBO}	Collector cut-off current	V_{CB}=80V; I_E=0			10	μA
I_{EBO}	Emitter cut-off current	V_{EB}=6V; I_C=0			10	μA
h_{FE-1}	DC current gain	I_C=1A ; V_{CE}=1V	70		240	
h_{FE-2}	DC current gain	I_C=6A ; V_{CE}=1V	40			
C_{OB}	Output capacitance	I_E=0 ; V_{CB}=10V, f=1MHz		220		pF
f_T	Transition frequency	I_C=1A ; V_{CE}=5V		80		MHz

Switching times

t_{on}	Turn-on time	I_{B1}=-I_{B2}=0.3A V_{CC}≈30V ,R_L=5Ω		0.2		μs
t_s	Storage time			1.0		μs
t_f	Fall time			0.2		μs

◆ h_{FE-1} Classifications

O	Y
70-140	120-240

PACKAGE OUTLINE

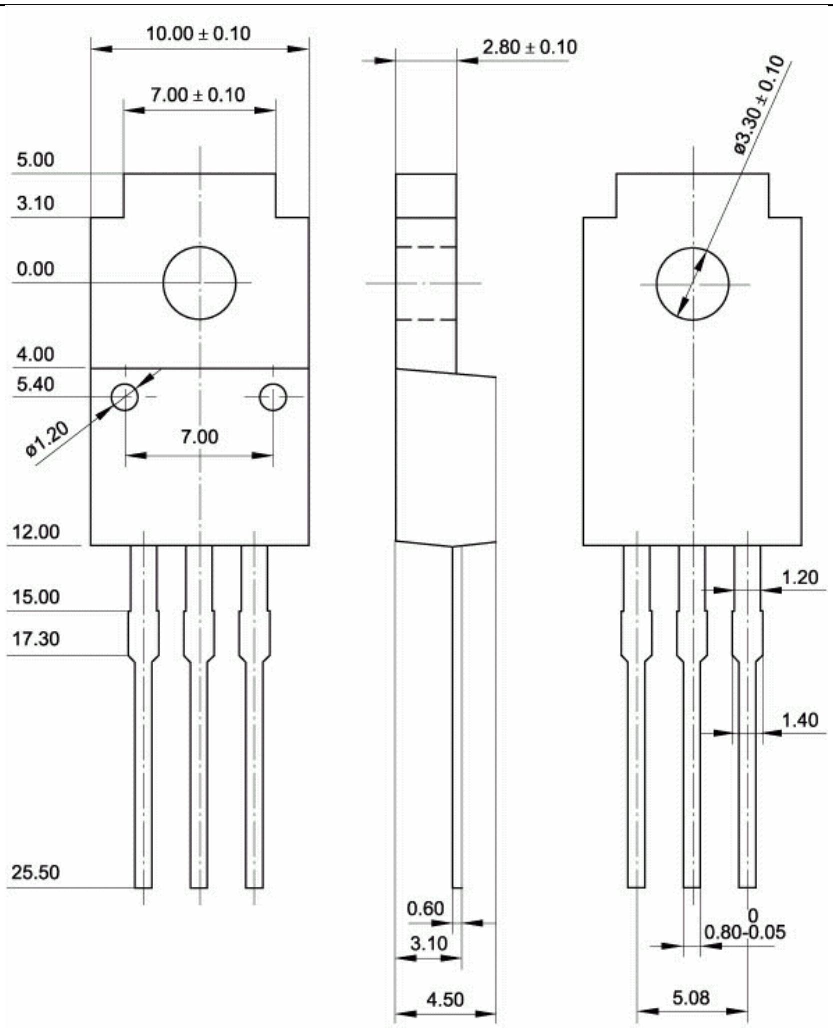

Fig.2 Outline dimensions

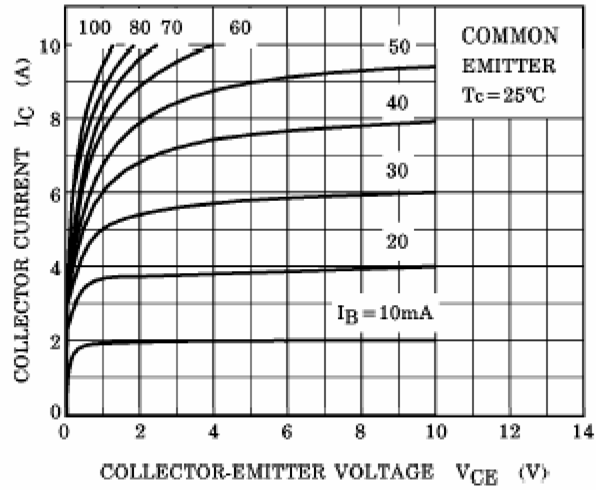

Fig.3 Static Characteristic

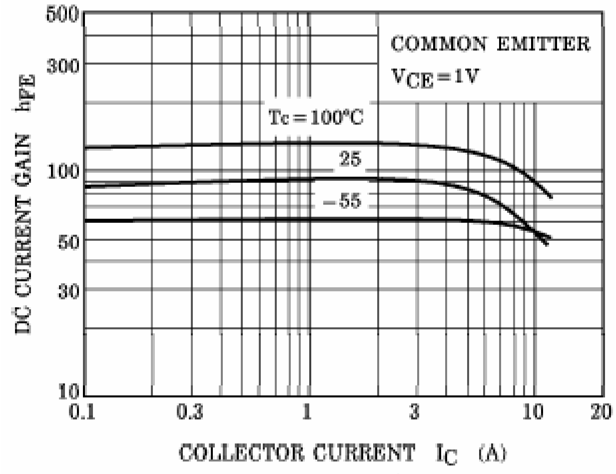

Fig.4 DC current Gain

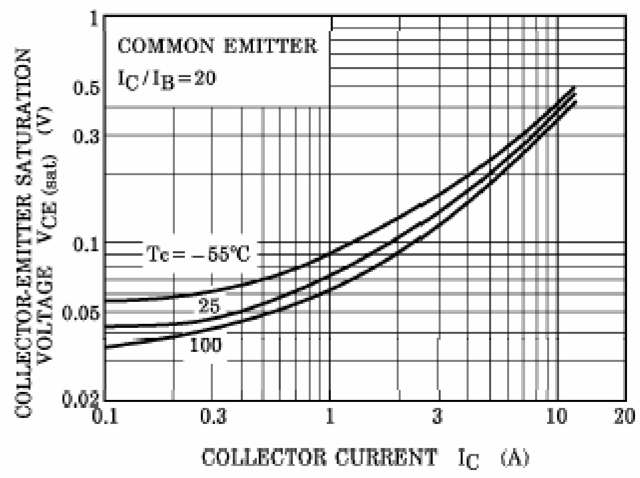

Fig.5 Collector-Emitter Saturation Voltage

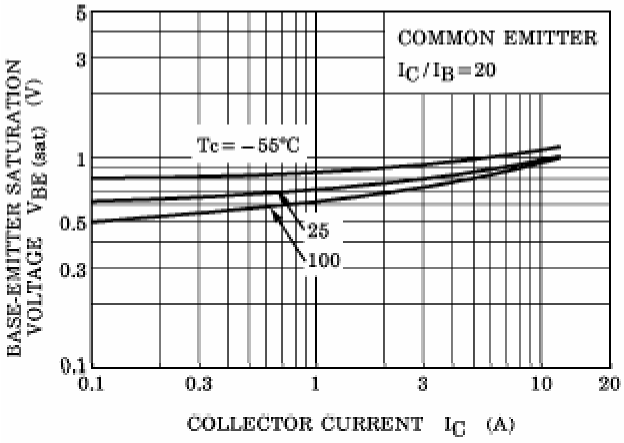

Fig.6 Base-Emitter Saturation Voltage

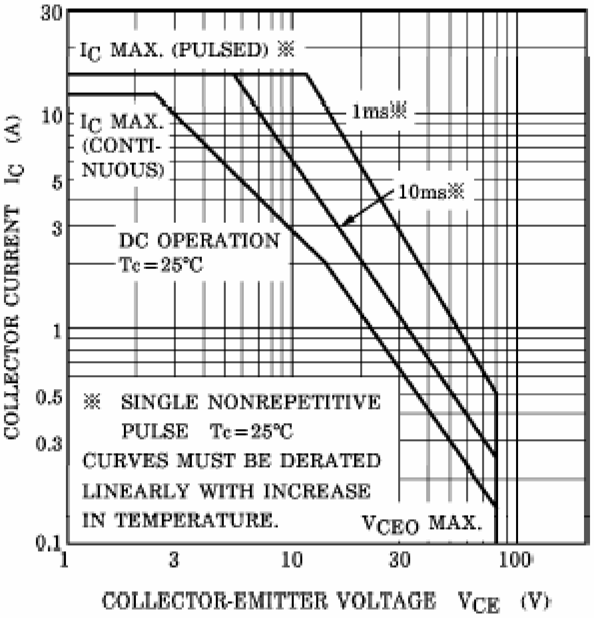

Fig.7 Safe Operating Area