

Silicon NPN Power Transistors

2SD895

DESCRIPTION

- With TO-3PN package
- Complement to type 2SB775
- Wide area of safe operation

APPLICATIONS

- 85V/6A, AF 35W output applications

PINNING

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

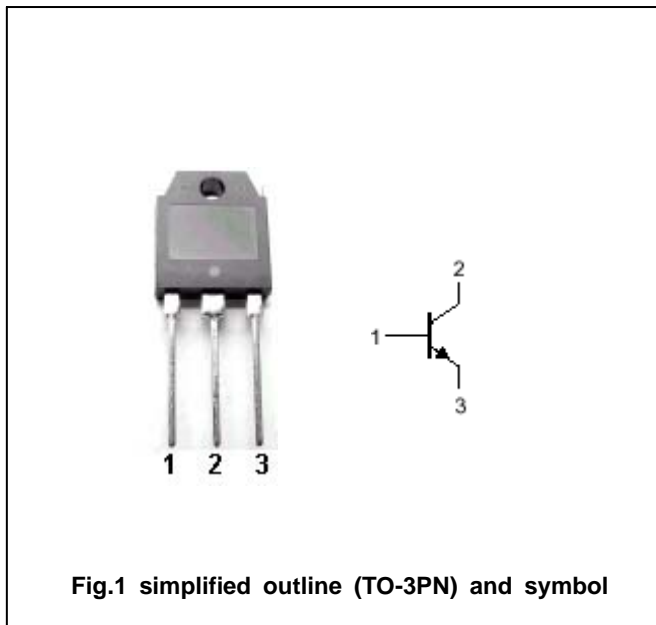


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings(Tc=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	85	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current (DC)		6	A
I_{CM}	Collector current-peak		10	A
P_C	Collector power dissipation	$T_C=25^\circ C$	60	W
T_j	Junction temperature		150	°C
T_{stg}	Storage temperature		-40~150	°C

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CHARACTERISTICS

 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=50\text{mA}; R_{BE}=\infty$	85			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=5\text{mA}; I_E=0$	100			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=5\text{mA}; I_C=0$	6			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=4\text{A}; I_B=0.4\text{A}$		0.9	2.0	V
V_{BE}	Base-emitter on voltage	$I_C=1\text{A}; V_{CE}=5\text{V}$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=40\text{V}; I_E=0$			0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=4\text{V}; I_C=0$			0.1	mA
h_{FE-1}	DC current gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	60		200	
h_{FE-2}	DC current gain	$I_C=3\text{A}; V_{CE}=5\text{V}$	20			
f_T	Transition frequency	$I_C=1\text{A}; V_{CE}=5\text{V}$		15		MHz
C_{OB}	Collector output capacitance	$f=1\text{MHz}; V_{CB}=10\text{V}$		160		pF

Switching times

t_{on}	Turn-on time	$I_C=1.0\text{A}; I_{B1}=-I_{B2}=0.1\text{A}$ $R_L=20\Omega$		0.20		μs
t_{stg}	Storage time			0.82		μs
t_f	Fall time			3.88		μs

◆ h_{FE-1} Classifications

D	E
60-120	100-200

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PACKAGE OUTLINE

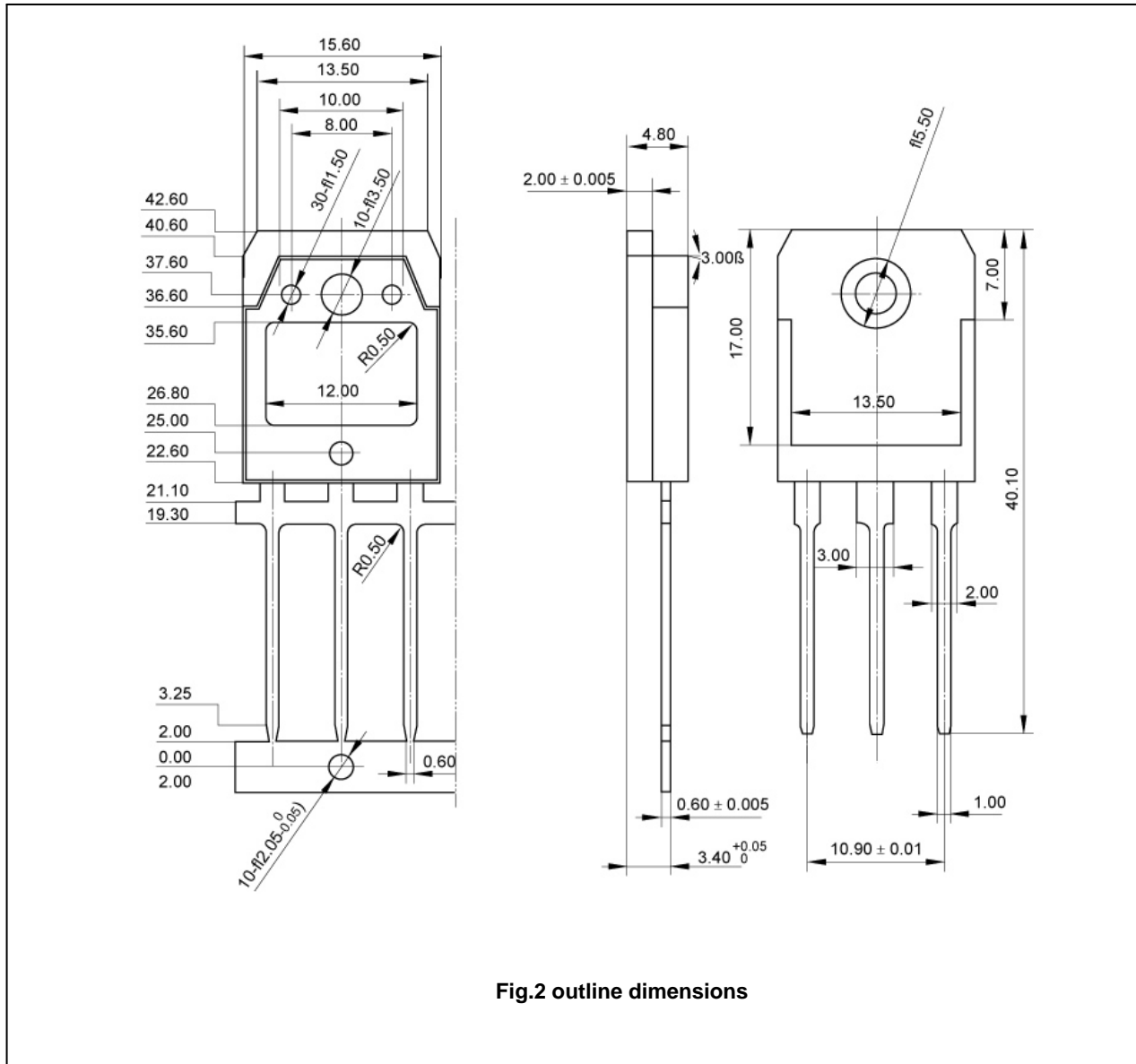


Fig.2 outline dimensions

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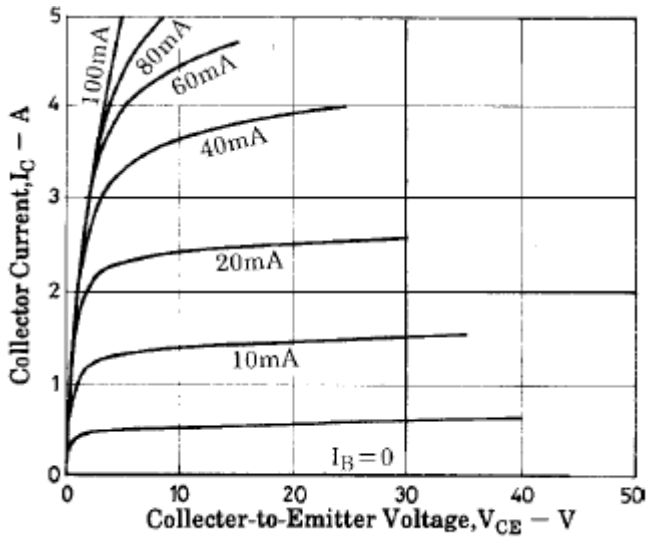


Fig.3 Static Characteristic

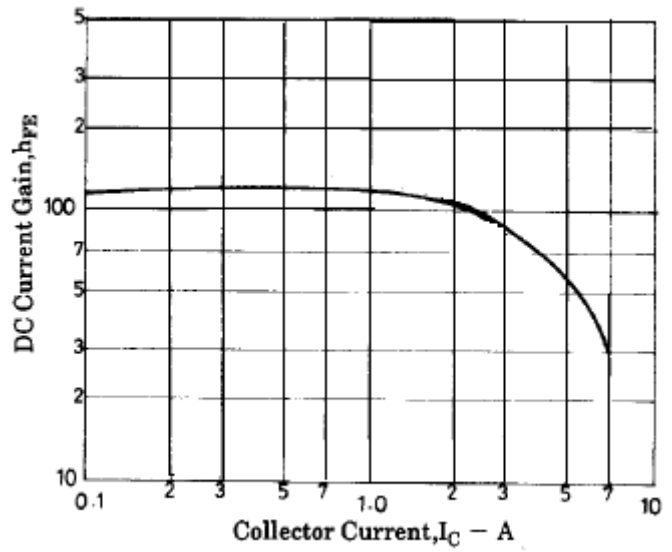


Fig.4 DC current Gain

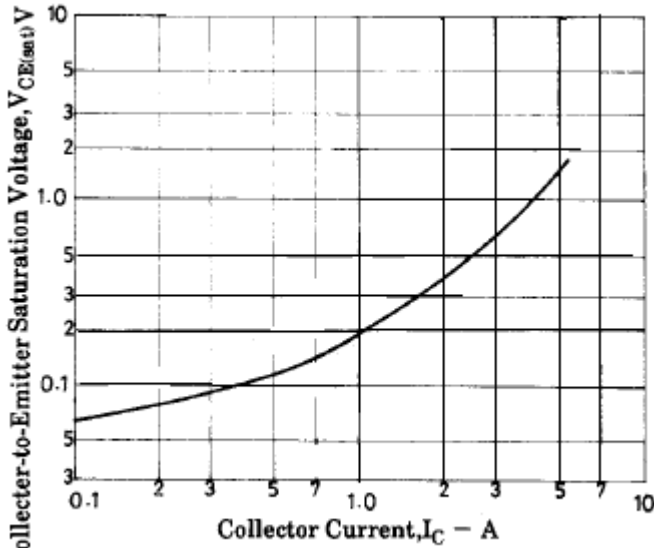


Fig.5 Collector-Emmitter Saturation Voltage

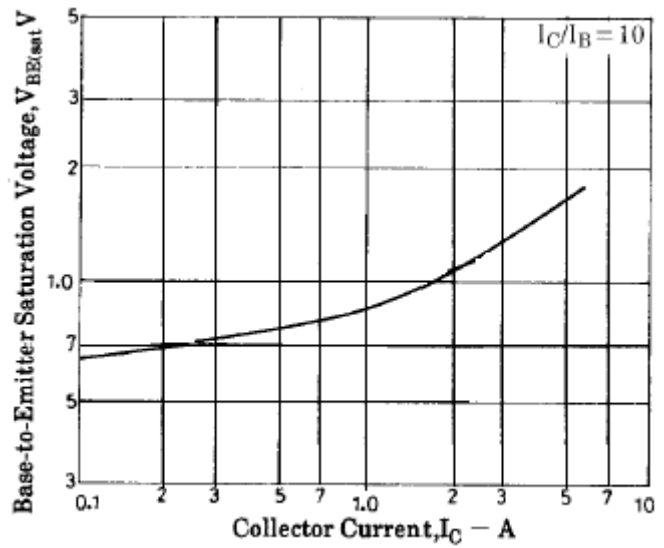


Fig.6 Base-Emmitter Saturation Voltage

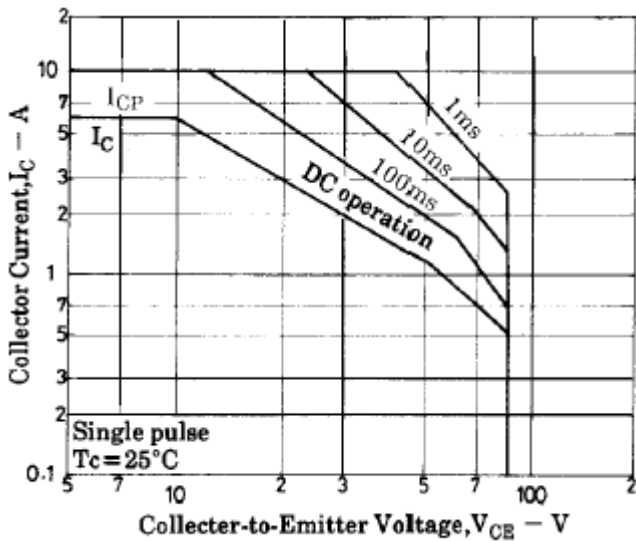


Fig.7 Safe Operating Area