

Silicon PNP Power Transistors

2SB827

DESCRIPTION

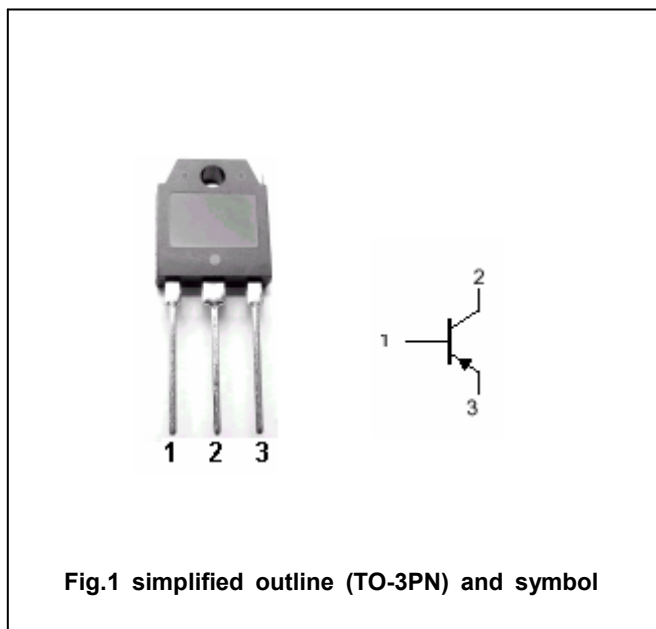
- With TO-3PN package
- Complement to type 2SD1063
- Wide area of safe operation
- Low collector-emitter saturation voltage :
 $V_{CE(sat)} = (-)0.4V$ max.

APPLICATIONS

- Universal high current switching as solenoid driving, high speed inverter and converter.

PINNING

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

Absolute maximum ratings($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-50	V
V_{EBO}	Emitter-base voltage	Open collector	-6	V
I_C	Collector current (DC)		-7	A
I_{CP}	Collector current (Pulse)		-14	A
P_C	Collector power dissipation	$T_c=25^\circ\text{C}$	60	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1\text{mA}$; $R_{BE} = \infty$	-50			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -1\text{mA}$; $I_E = 0$	-60			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -1\text{mA}$; $I_C = 0$	-6			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C = -4\text{A}$; $I_B = -0.4\text{A}$			-0.4	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	$I_C = -1\text{A}$; $V_{CE} = -2\text{V}$	70		280	
h_{FE-2}	DC current gain	$I_C = -5\text{A}$; $V_{CE} = -2\text{V}$	30			
f_T	Transition frequency	$I_C = -1\text{A}$; $V_{CE} = -5\text{V}$		10		MHz

Switching times

t_{on}	Turn-on time	$I_C = -2.0\text{A}$; $I_{B1} = -I_{B2} = -0.2\text{A}$ $V_{CC} = -20\text{V}$; $R_L = 10\Omega$		0.20		μs
t_{stg}	Storage time			0.70		μs
t_f	Fall time			0.10		μs

◆ h_{FE-1} Classifications

Q	R	S
70-140	100-200	140-280

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PACKAGE OUTLINE

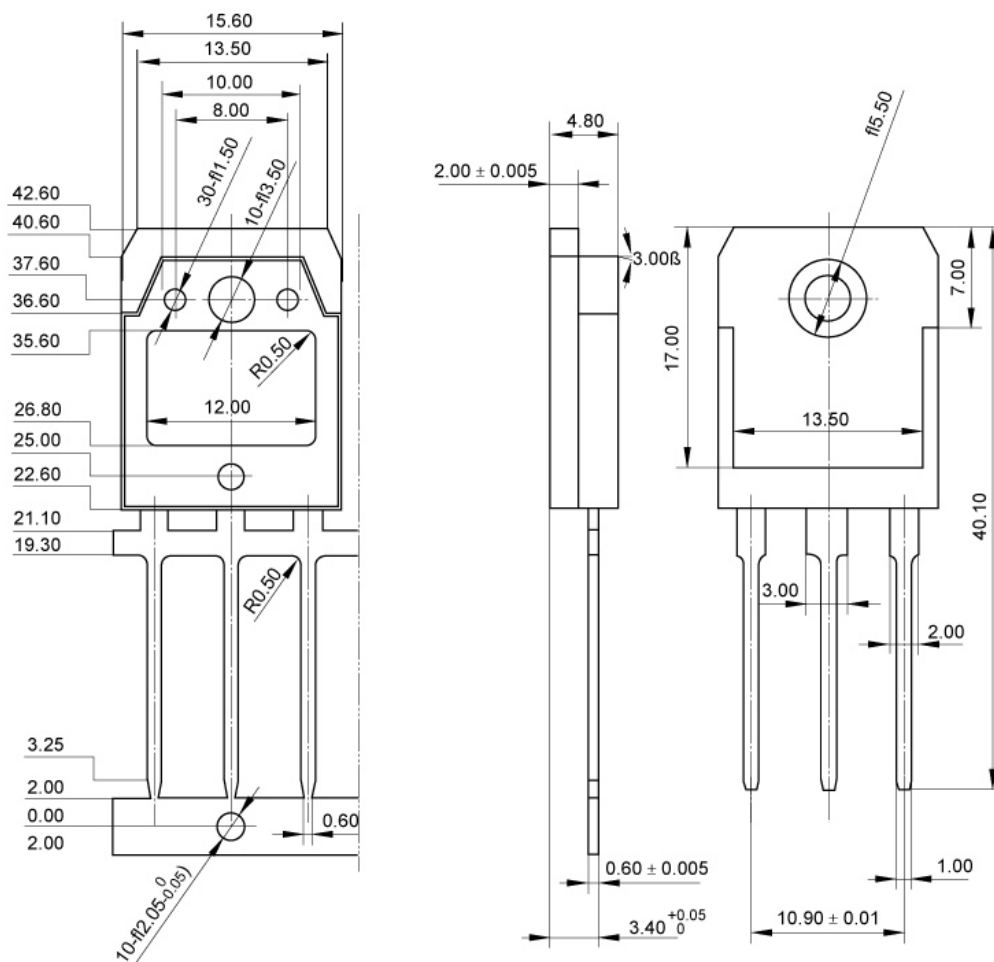


Fig.2 outline dimensions

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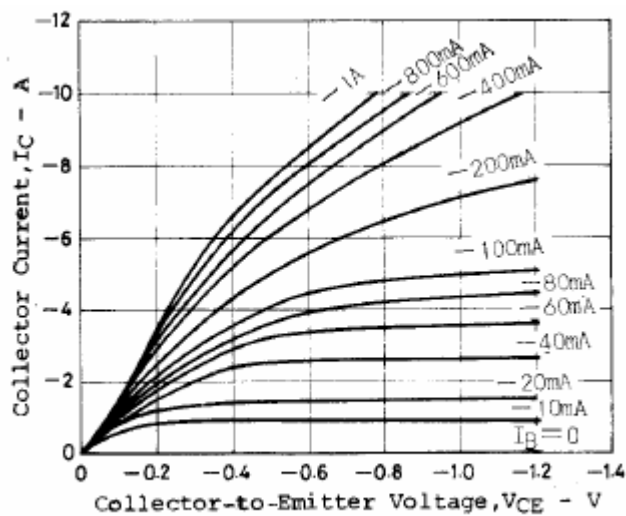


Fig.3 Static Characteristic

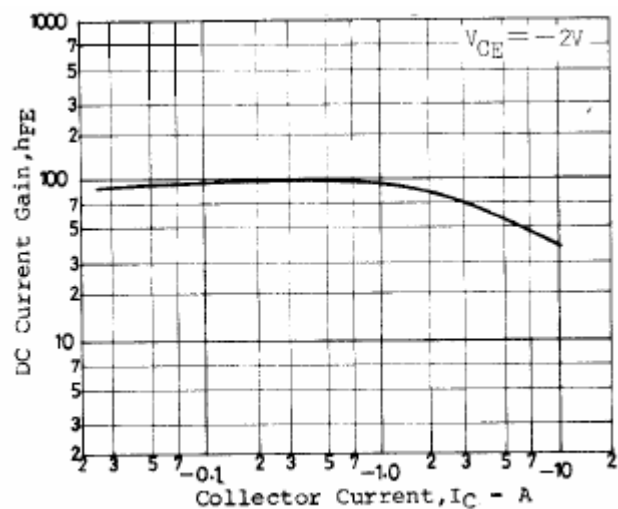


Fig.4 DC current Gain

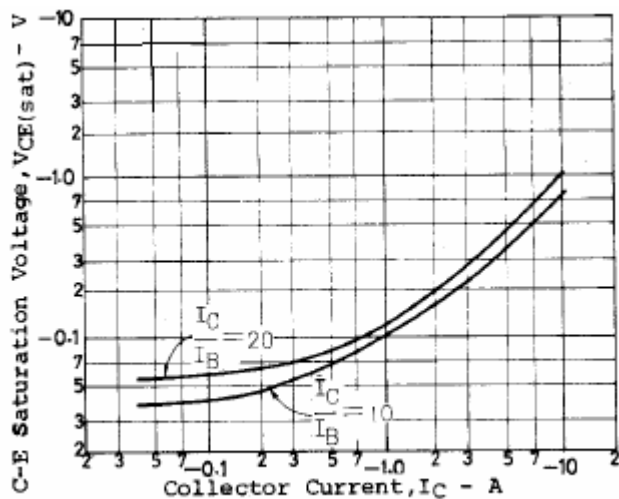


Fig.5 Collector-Emitter Saturation Voltage

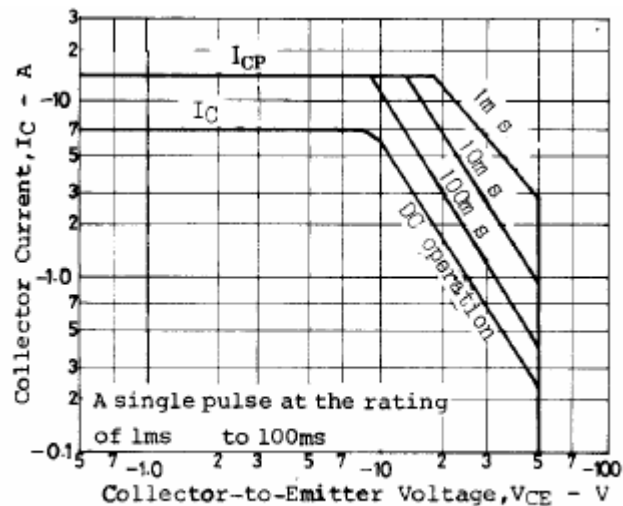


Fig.6 Safe Operating Area