Silicon NPN Power Transistors 2SD1825

DESCRIPTION

- With TO-220F package
- Complement to type 2SB1223
- High DC current gain.
- Large current capacity and wide ASO.
- DARLINGTON

APPLICATIONS

- For use in control of motor drivers, printer hammer drivers, and constant-voltage regulators.

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

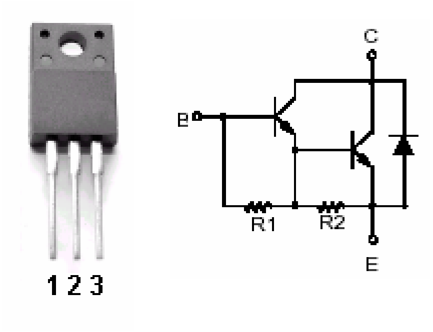

Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	70	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		4	A
I_{CM}	Collector current-peak		6	A
P_C	Collector dissipation	T_C=25℃	20	W
		T_a=25℃	2	
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=5mA; I_E=0	70			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=50mA; $R_{BE}=\infty$	60			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=2A ; I_B=4mA			1.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=2A ; I_B=4mA			2.0	V
I_{CBO}	Collector cut-off current	V_{CB}=40V;I_E=0			0.1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V;I_C=0			3.0	mA
h_{FE}	DC current gain	I_C=2A ; V_{CE}=2V	2000	5000		
f_T	Transition frequency	I_C=2A ; V_{CE}=5V		20		MHz

Switching times

t_{on}	Turn-on time	I_C=2A; $I_{B1}=-I_{B2}$=4mA V_{CC}=20V ,R_L=10Ω		0.6		μs
t_s	Storage time			2.7		μs
t_f	Fall time			1.6		μs

PACKAGE OUTLINE

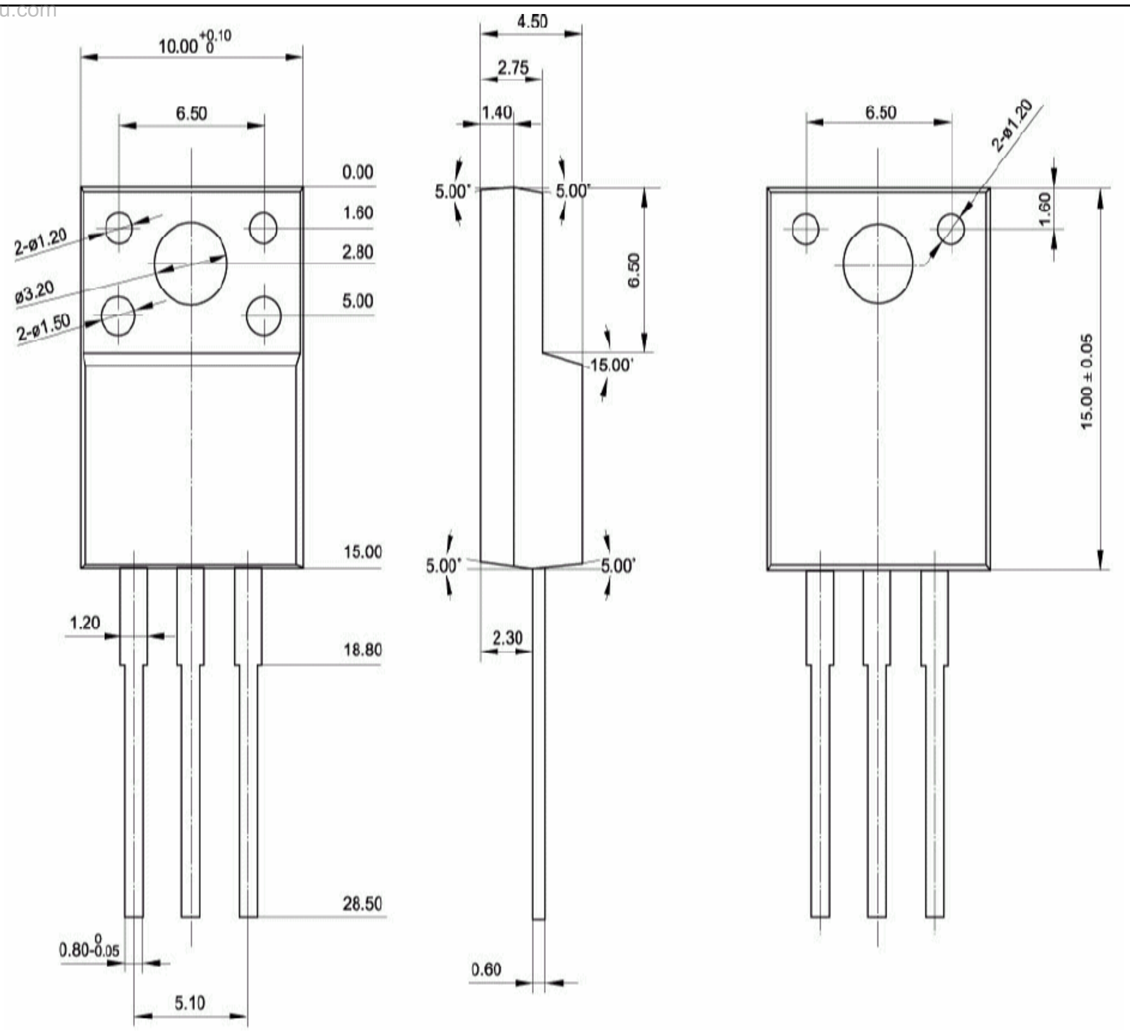

Fig.2 Outline dimensions