Silicon NPN Power Transistors 2SD1415A

DESCRIPTION

- ·With TO-220F package
- ·High DC current gain
- ·Low saturation voltage
- ·DARLINGTON

APPLICATIONS

- ·High power switching applications
- ·Hammer drive,pulse motor drive applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

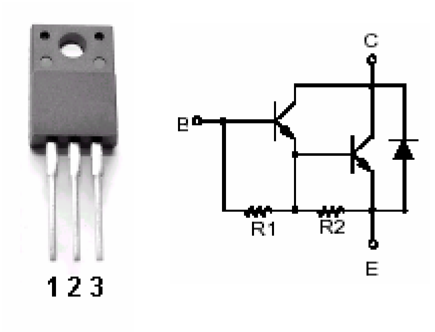

Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	120	V
V_{CEO}	Collector -emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		7	A
I_{CP}	Collector current peak		10	A
I_B	Base current		0.7	A
P_C	Collector power dissipation	T_C=25□	25	W
		T_a=25□	2.0	
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=50mA; I_B=0	100			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=3A ;I_B=6mA		0.9	1.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=3A ;I_B=6mA		1.5	2.0	V
I_{CBO}	Collector cut-off current	V_{CB}=100V; I_E=0			100	μA
I_{EBO}	Emitter cut-off current	V_{EB}=6V; I_C=0			3.0	mA
h_{FE-1}	DC current gain	I_C=3A ; V_{CE}=3V	2000		15000	
h_{FE-2}	DC current gain	I_C=6A ; V_{CE}=3V	1000			
Switching times						
t_{on}	Turn-on time	I_{B1}=-I_{B2}=6mA V_{CC}≈45V ,R_L=15Ω		0.3		μs
t_{stg}	Storage time			5.1		μs
t_f	Fall time			0.6		μs

PACKAGE OUTLINE

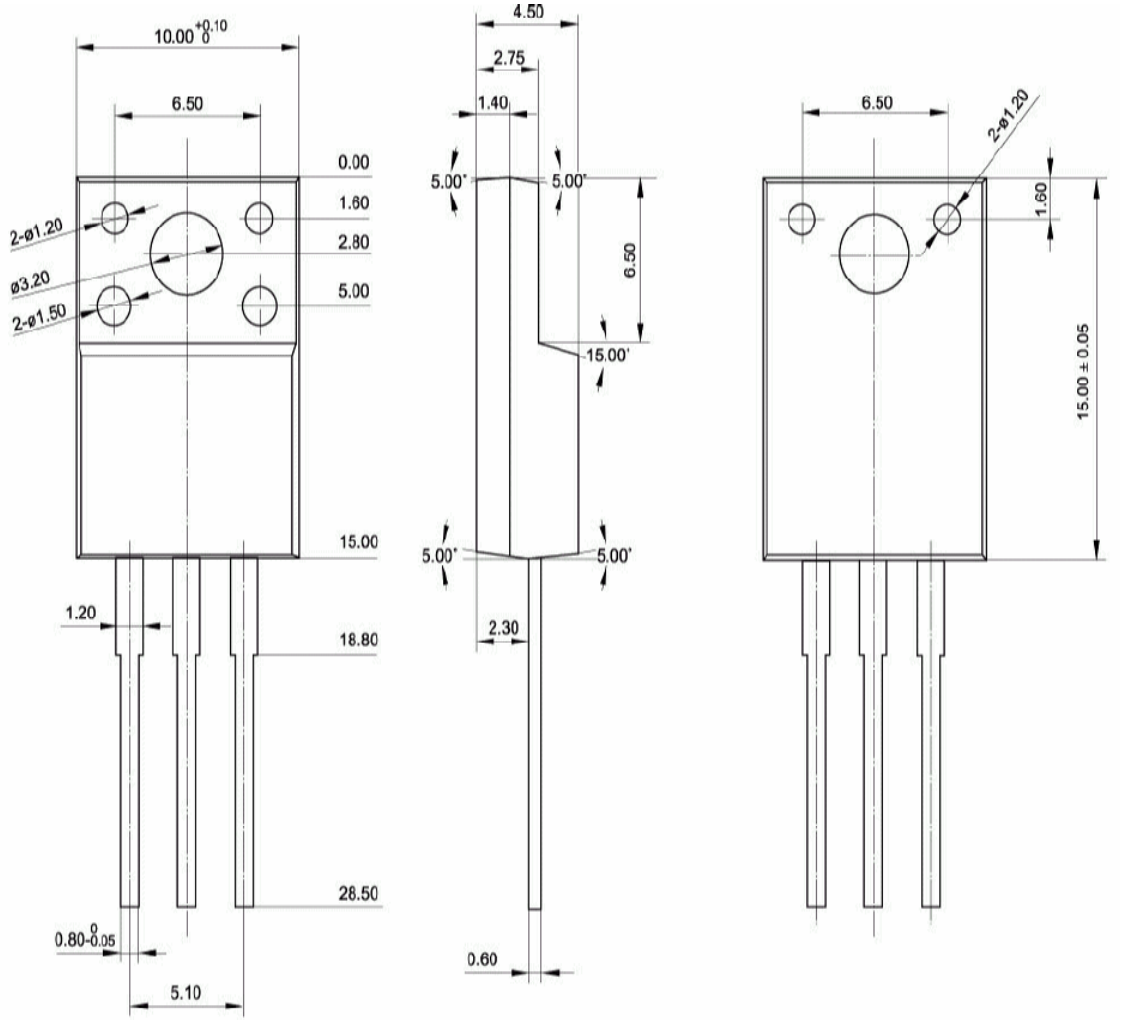

Fig.2 Outline dimensions