Silicon NPN Power Transistors 2SD2079

DESCRIPTION

- With TO-220F package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type 2SB1381

APPLICATIONS

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

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

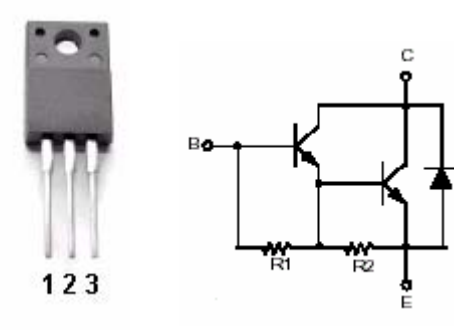

Fig.1 simplified outline (TO-220F) and symbol

Absolute maximum ratings (Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		5	A
I_{CM}	Collector current-peak		8	A
I_B	Base current		0.5	A
P_C	Collector dissipation	T_a=25℃	2	W
		T_C=25℃	30	
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-55~150	℃

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CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=30mA ;I_B=0	100			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	I_C=3A ;I_B=6mA			1.5	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	I_C=5A ;I_B=20mA			2.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=3A ;I_B=6mA			2.5	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			2.5	mA
h_{FE-1}	DC current gain	I_C=3A ; V_{CE}=3V	2000		15000	
h_{FE-2}	DC current gain	I_C=5A ; V_{CE}=3V	1000			

Switching times

t_{on}	Turn-on time	I_{B1}=-I_{B2}=6mA V_{CC}≈30V ,R_L=10Ω		1.0		μs
t_s	Storage time			4.0		μs
t_f	Fall time			2.5		μs

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PACKAGE OUTLINE

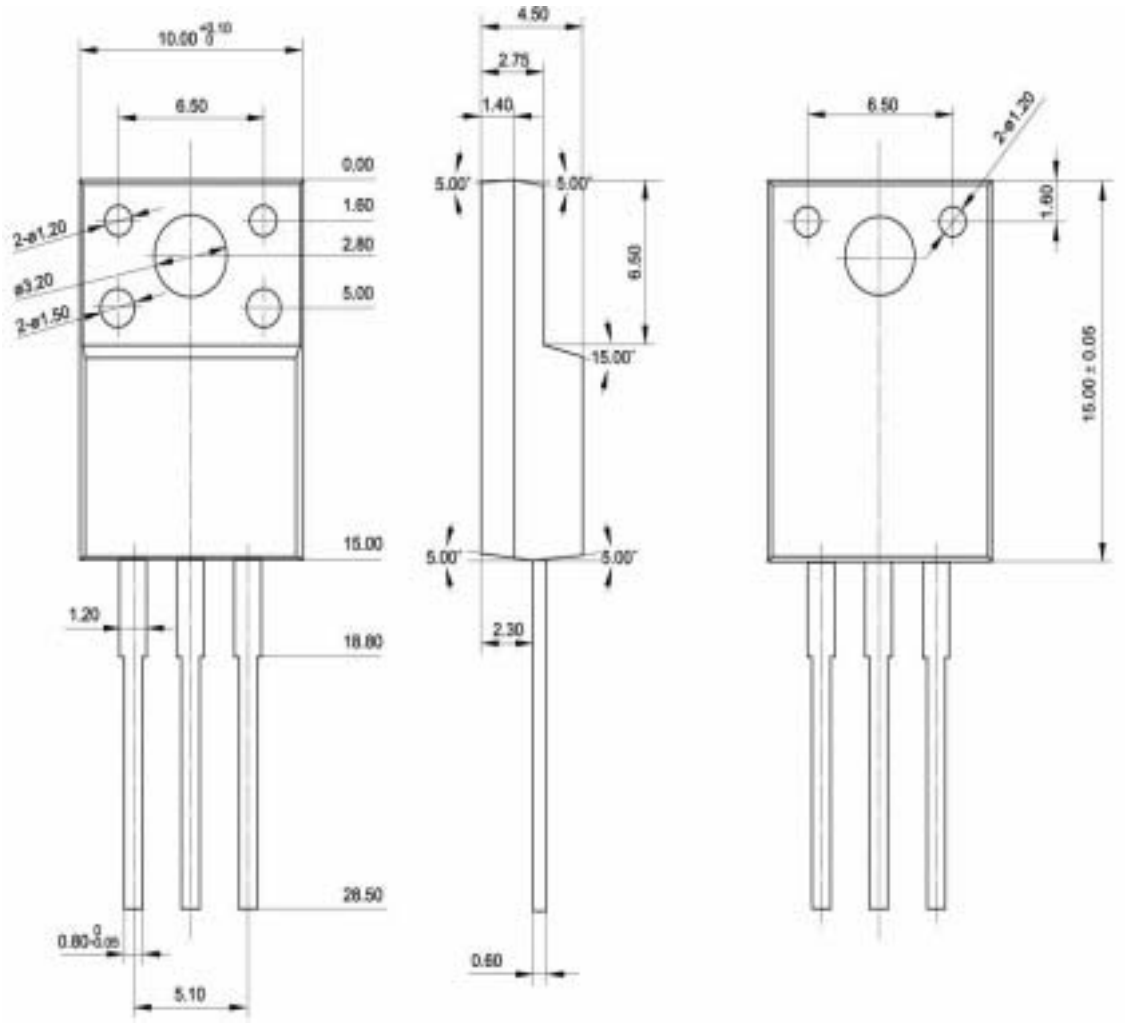

Fig.2 Outline dimensions