

Silicon NPN Power Transistors

2SD2079

DESCRIPTION

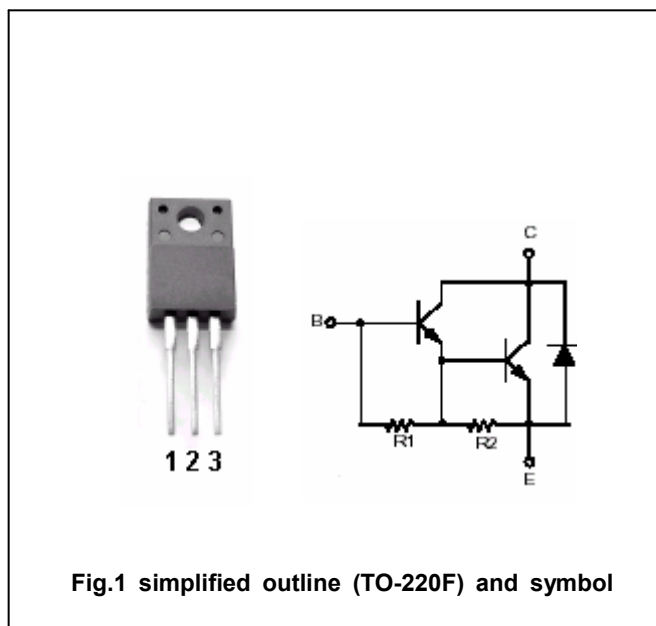
- With TO-220F package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type 2SB1381

APPLICATIONS

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

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

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	$T_a=25^\circ\text{C}$	2	W
		$T_C=25^\circ\text{C}$	30	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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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	$I_{B1}=-I_{B2}=6mA$ $V_{CC}\approx 30V, R_L=10\Omega$		1.0		μs
t_s	Storage time			4.0		μs
t_f	Fall time			2.5		μs

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