

Silicon NPN Power Transistors

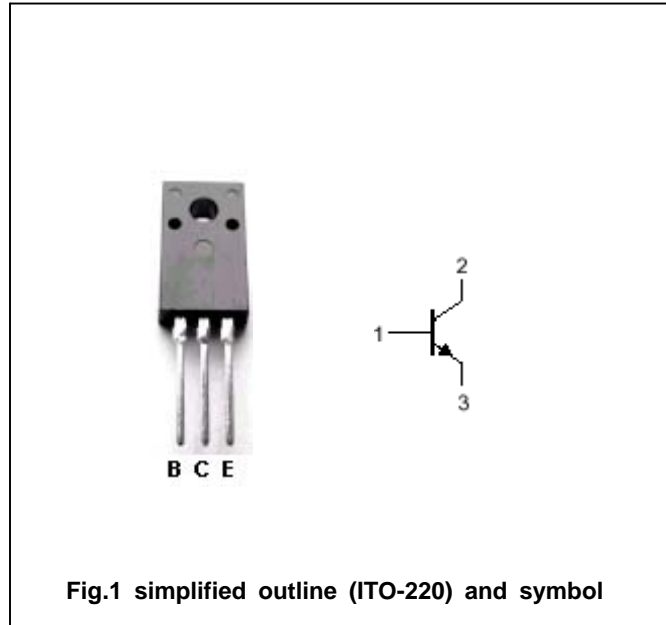
2SD1788

DESCRIPTION

- With ITO-220 package
- Switching power transistor

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



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		±4	A
I _{CM}	Collector current-Peak		±6	A
I _B	Base current		0.3	A
I _{BM}	Base current-Peak		0.5	A
P _T	Total power dissipation	T _C =25	25	W
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-55~150	
V _{dis}	Dielectric strength	Terminals to case,AC1 minute	2	kV
TOR	Mounting torque	(Recommended torque:0.3N·m)	0.5	N·m

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction to case	5.0	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEsat}	Collector-emitter saturation voltage	I _C =1A; I _B =2mA			1.5	V
V _{BEsat}	Emitter-base saturation voltage	I _C =1A; I _B =2mA			2.0	V
I _{CBO}	Collector cut-off current	V _{CB} =100V			0.1	mA
I _{CEO}	Collector cut-off current	V _{CE} =100V			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =7V			5	mA
h _{FE}	DC current gain	I _C =1A; V _{CE} =3V	1500		30000	
f _T	Transition frequency	I _C =0.4A; V _{CE} =10V		20		MHz
t _{on}	Turn-on time	I _C =1A; I _{B1} =I _{B2} =2mA, R _L =25 V _{BB2} =4V			2.0	μs
t _s	Storage time				12	μs
t _f	Fall time				5.0	μs

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PACKAGE OUTLINE

