Silicon NPN Power Transistors 2SD1788

DESCRIPTION

- With ITO-220 package
- Switching power transistor

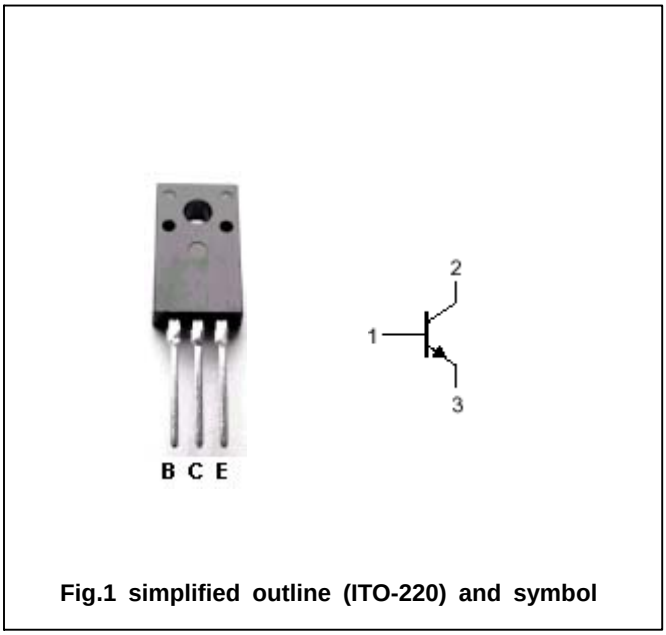


Fig.1 simplified outline (ITO-220) and symbol

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
$R_{th\ j\text{-}C}$	Thermal resistance junction to case	5.0	℃/W

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CHARACTERISTICS

Tj=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=25Ω V_{BB2}=4V			2.0	μs
t_s	Storage time				12	μs
t_f	Fall time				5.0	μs

PACKAGE OUTLINE

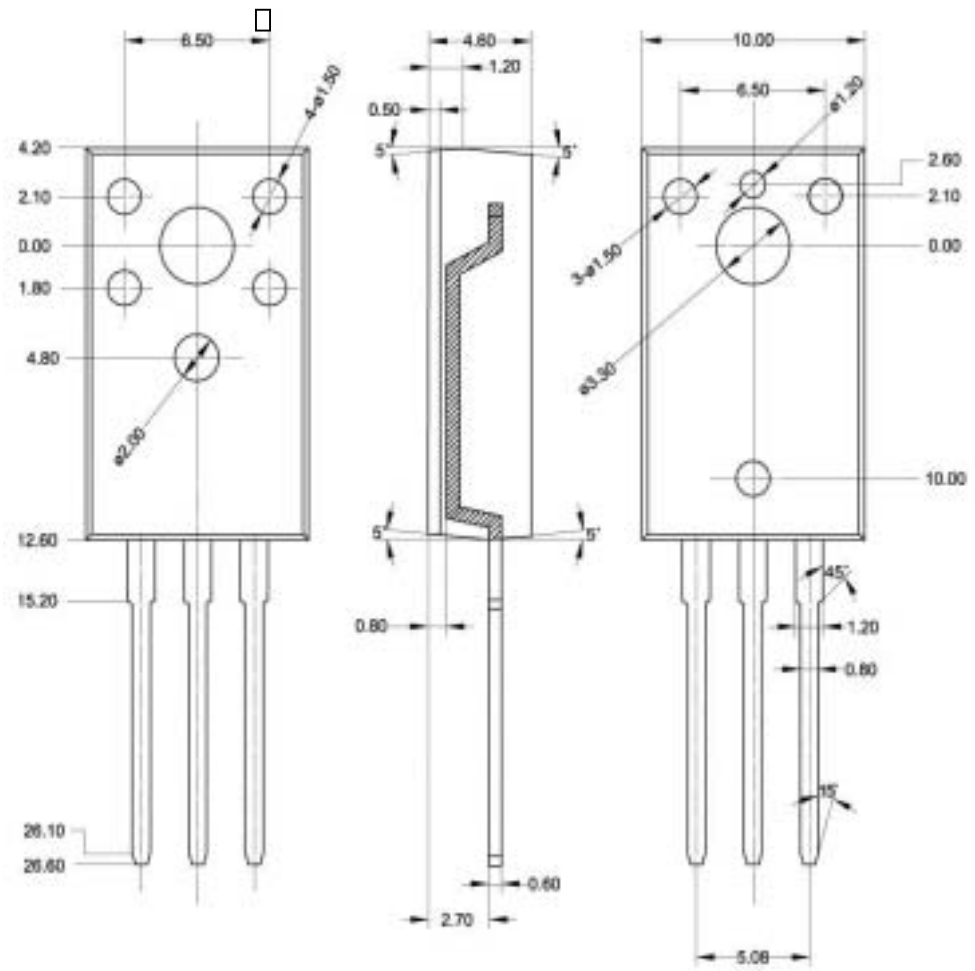


Fig.2 Outline dimensions (unindicated tolerance:±0.20 mm)