Silicon NPN Power Transistors 2SD1025

DESCRIPTION

·With TO-220 package
·High DC current gain
·DARLINGTON

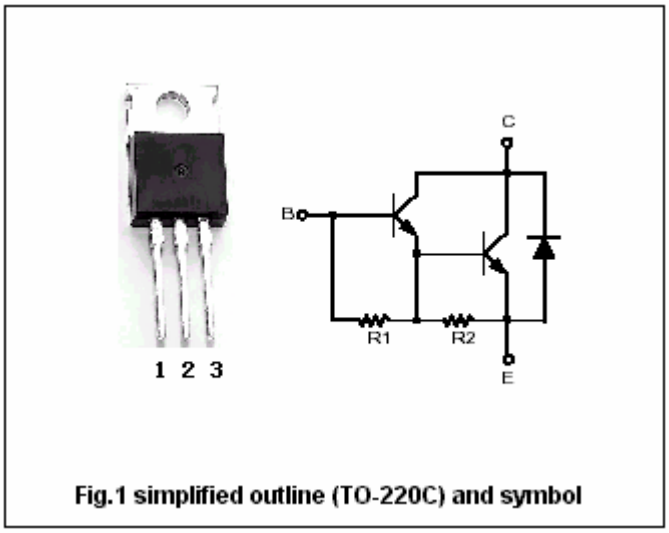

Fig.1 simplified outline (TO-220C) and symbol

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	200	V
V_{CEO}	Collector-emitter voltage	Open base	200	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		8	A
I_{CM}	Collector current-Peak		12	A
I_B	Base current		0.5	A
I_{BM}	Base current-Peak		1.0	A
P_T	Total power dissipation	T_C=25□	50	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{\Theta j\text{-}C}$	Thermal resistance junction to case	2.5	□/W

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CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=0.1A ; I_B=0	200			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=5A; I_B=10mA			1.5	V
V_{BEsat}	Base-emitter saturation voltage	I_C=5A ;I_B=10mA			2.0	V
I_{CBO}	Collector cut-off current	V_{CB}=200V ;I_E=0			0.1	mA
I_{CEO}	Collector cut-off current	V_{CE}=200V; I_B=0			0.1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=7V; I_C=0			5.0	mA
h_{FE}	DC current gain	I_C=5A ; V_{CE}=3V	1500		30000	
f_T	Transition frequency	I_C=0.8A ; V_{CE}=10V		20		MHz
Switching times						
t_{on}	Turn-on time	I_C=5A I_{B1}=- I_{B2}=10mA R_L=5Ω; V_{BB2}=4V			2.0	μs
t_s	Storage time				8.0	μs
t_f	Fall time				5.0	μs

PACKAGE OUTLINE

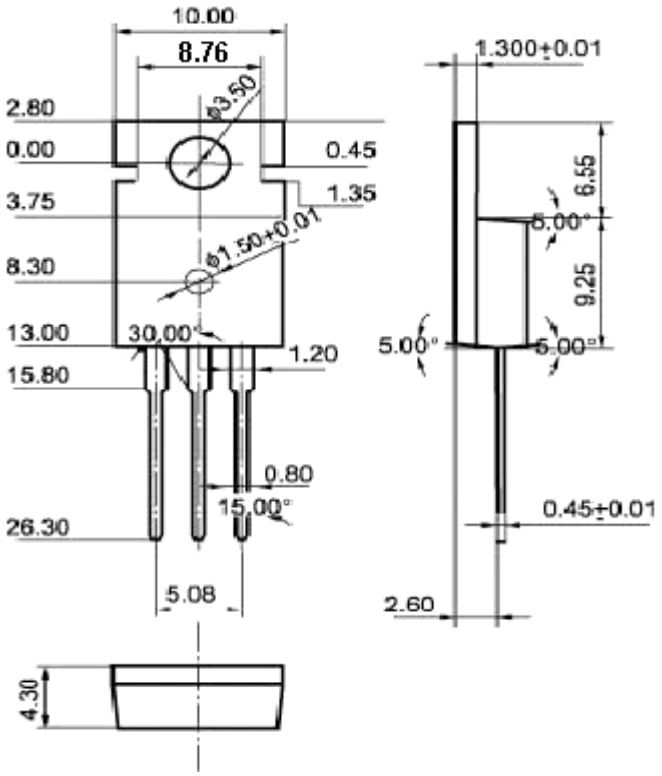

Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)