Silicon NPN Power Transistors 2SD970

DESCRIPTION

·With TO-220 package
·High DC current gain
·DARLINGTON
·Complement to type 2SB791

APPLICATIONS

·For medium speed and power switching applications

PINNING

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

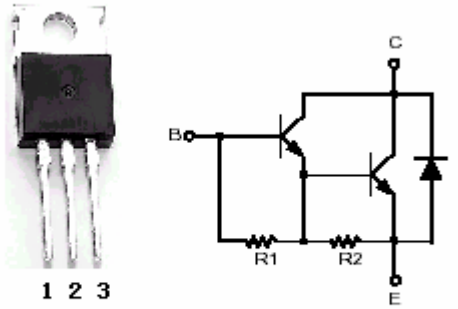

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	120	V
V_{CEO}	Collector-emitter voltage	Open base	120	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		8	A
I_{CM}	Collector current-peak		12	A
P_C	Collector dissipation	T_C=25□	40	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

Silicon NPN Power Transistors 2SD970

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=25mA ;R_{BE}=0	120			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=50mA ; I_C=0	7			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	I_C=4A ;I_B=8mA			1.5	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	I_C=8A ;I_B=80mA			3.0	V
$V_{BEsat-1}$	Base-emitter saturation voltage	I_C=4A ;I_B=8mA			2.0	V
$V_{BEsat-2}$	Base-emitter saturation voltage	I_C=8A ;I_B=80mA			3.5	V
I_{CBO}	Collector cut-off current	V_{CB}=120V; I_E=0			100	μA
I_{CEO}	Collector cut-off current	V_{CE}=100V; R_{BE}=∞			10	μA
h_{FE}	DC current gain	I_C=4A ; V_{CE}=3V	1000		20000	
Switching times						
t_{on}	Turn-on time	I_C=4A ;I_{B1}=-I_{B2}=8mA		0.4		μs
t_s	Storage time			5.4		μs
t_f	Fall time			1.1		μs

PACKAGE OUTLINE

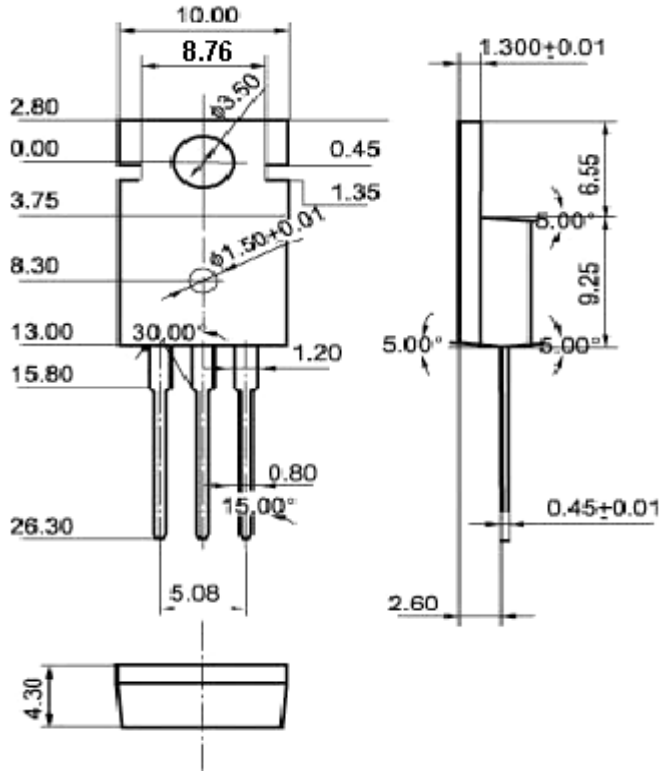

Fig.2 Outline dimensions