Silicon NPN Darlington Power Transistors 2SC3144

DESCRIPTION

·With TO-220C package
·High switching speed
·High DC current gain
·Wide area of safe operation
·Complement to type 2SA1258

APPLICATIONS

·60V/3A for High-Speed Drivers Applications

PINNING

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

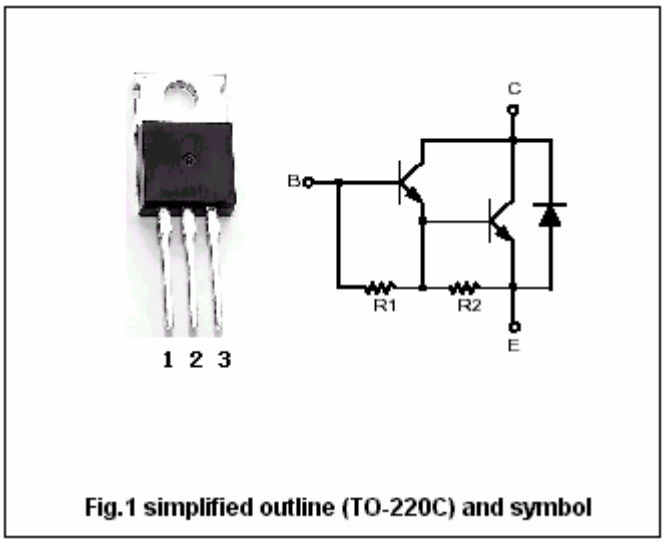

Fig.1 simplified outline (TO-220C) and symbol

ABSOLUTE MAXIMUM RATINGS (T_a=25□)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	70	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current-DC		3	A
I_{CP}	Collector current-Pulse		5	A
P_C	Collector power dissipation	T_C=25□	20	W
		T_a=25□	1.75	
T_j	Junction temperature		125	□
T_{stg}	Storage temperature		-55~125	□

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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=50mA ;R_{BE}=∞	60			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=5mA ;I_E=0	70			V
$V_{CE(sat)-1}$	Collector-emitter saturation voltage	I_C=1.5A ,I_B=3mA		0.9	1.5	V
$V_{CE(sat)-2}$	Collector-emitter saturation voltage	I_C=1.5A ,I_B=3mA			2.0	V
I_{CBO}	Collector cut-off current	V_{CB}=40V, I_E=0			0.1	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			3.0	mA
h_{FE}	DC current gain	I_C=1.5A ; V_{CE}=2V	2000			
f_T	Transition frequency	I_C=1.5A ; V_{CE}=5V		200		MHz
Switching times						
t_{on}	Turn-on time	I_C=1A ;I_{B1}=-I_{B2}=2m A R_L=20Ω,V_{CC}=20V		0.3		μs
t_s	Storage time			1.2		μs
t_f	Fall time			0.2		μs

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PACKAGE OUTLINE

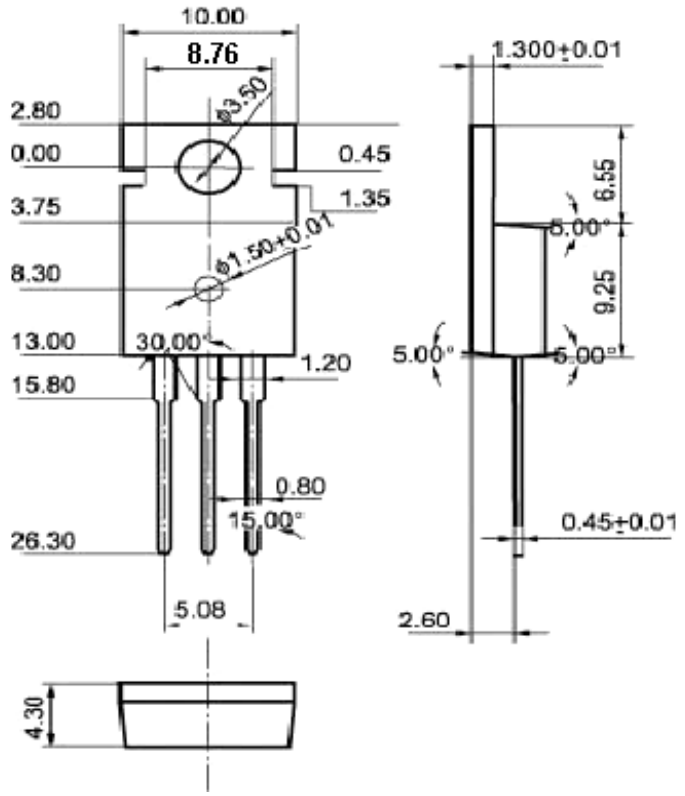

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)