

Silicon NPN Darlington Power Transistors

2SC3144

DESCRIPTION

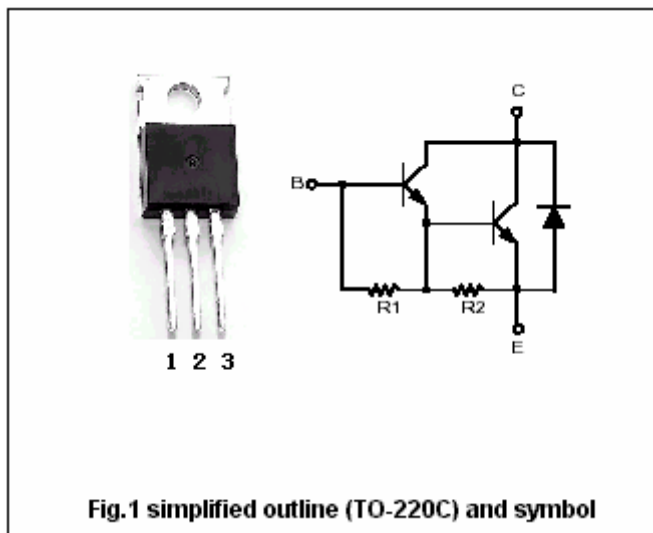
- With TO-220C package
- High switching speed
- High DC current gain
- Wide area of safe operation
- Complement to type 2SA1258

APPLICATIONS

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

PINNING

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



ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

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°C	20	W
		T _a =25°C	1.75	
T _j	Junction temperature		125	°C
T _{stg}	Storage temperature		-55~125	°C

Silicon NPN Darlington Power Transistors

2SC3144

CHARACTERISTICS

T_j=25°C 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 =20 Ω , V _{CC} =20V		0.3		μ s
t _s	Storage time			1.2		μ s
t _f	Fall time			0.2		μ s

Silicon NPN Darlington Power Transistors

2SC3144

PACKAGE OUTLINE

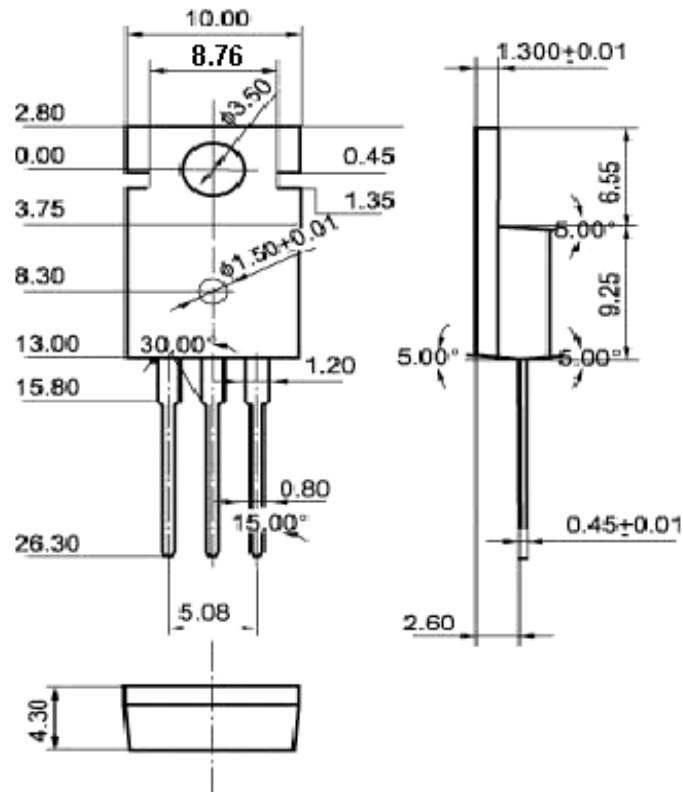


Fig.2 Outline dimensions (unindicated tolerance: ±0.10 mm)