

Silicon NPN Darlington Power Transistors

2SC3146

DESCRIPTION

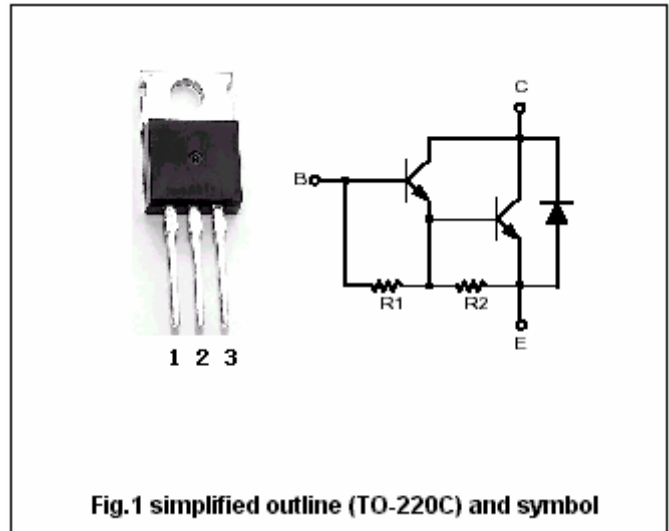
- With TO-220C package
- High switching speed
- High DC current gain
- Wide area of safe operation
- Complement to type 2SA1260

APPLICATIONS

- 60V/7A 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		7	A
P _C	Collector power dissipation	T _C =25°C	40	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

2SC3146

CHARACTERISTICS

 $T_j=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=50\text{mA}; R_{BE}=\infty$	60			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=5\text{mA}; I_E=0$	70			V
$V_{CE(sat)-1}$	Collector-emitter saturation voltage	$I_C=3.5\text{A}, I_B=7\text{mA}$			1.5	V
$V_{CE(sat)-2}$	Collector-emitter saturation voltage	$I_C=3.5\text{A}, I_B=7\text{mA}$			2.0	V
I_{CBO}	Collector cut-off current	$V_{CB}=40\text{V}, I_E=0$			0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5\text{V}, I_C=0$			3.0	mA
h_{FE}	DC current gain	$I_C=3.5\text{A}; V_{CE}=2\text{V}$	2000			

Silicon NPN Darlington Power Transistors

2SC3146

PACKAGE OUTLINE

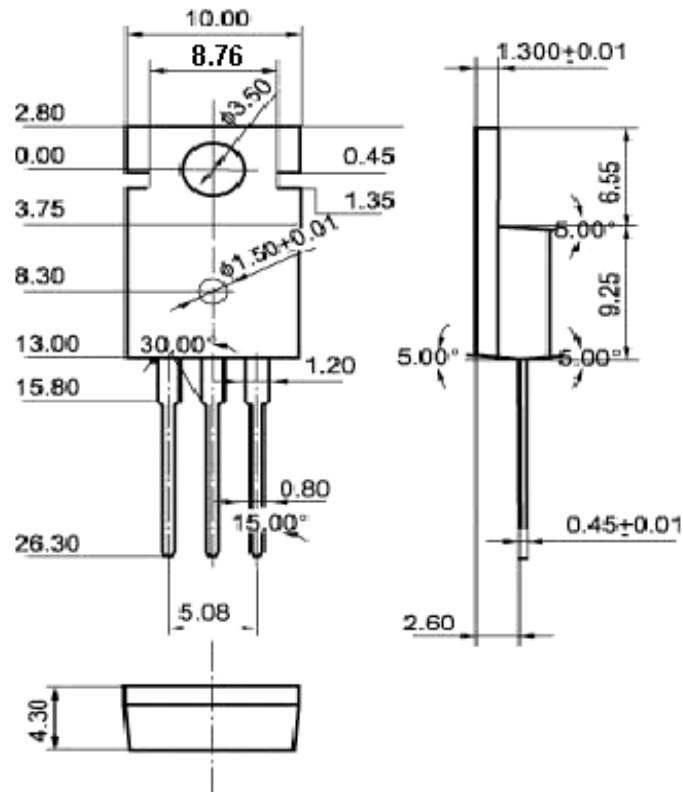


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)