

isc Silicon NPN Darlington Power Transistor
2SC3146
DESCRIPTION

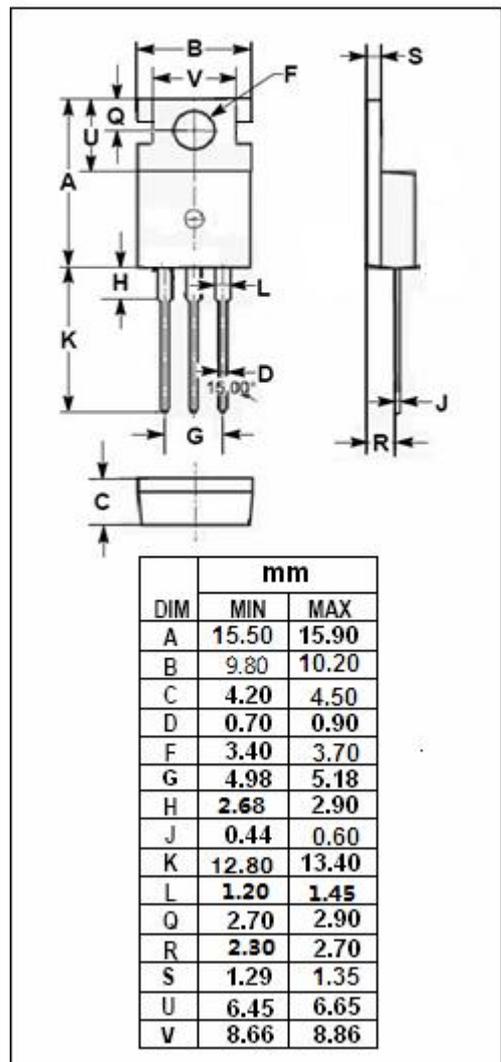
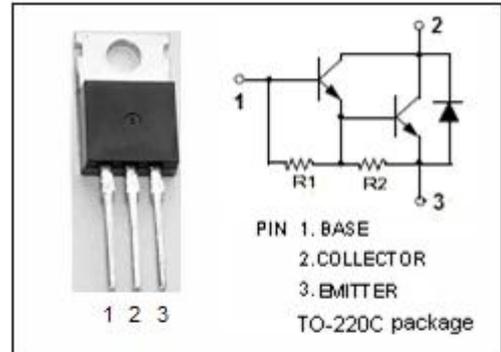
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 60V(\text{Min})$
- High DC Current Gain
: $h_{FE} = 2000(\text{Min}) @ I_C = 3.5A$
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high-speed drivers applications.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	7	A
P_C	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1.75	W
	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	40	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 5mA; I _E = 0	70			V
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; R _{BE} = ∞	60			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3.5A; I _B = 7mA			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 3.5A; I _B = 7mA			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 40V; I _E =0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C =0			3	mA
h _{FE}	DC Current Gain	I _C = 3.5A; V _{CE} = 2V	2000			

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