

isc Silicon NPN Power Transistor
2SC2140
DESCRIPTION

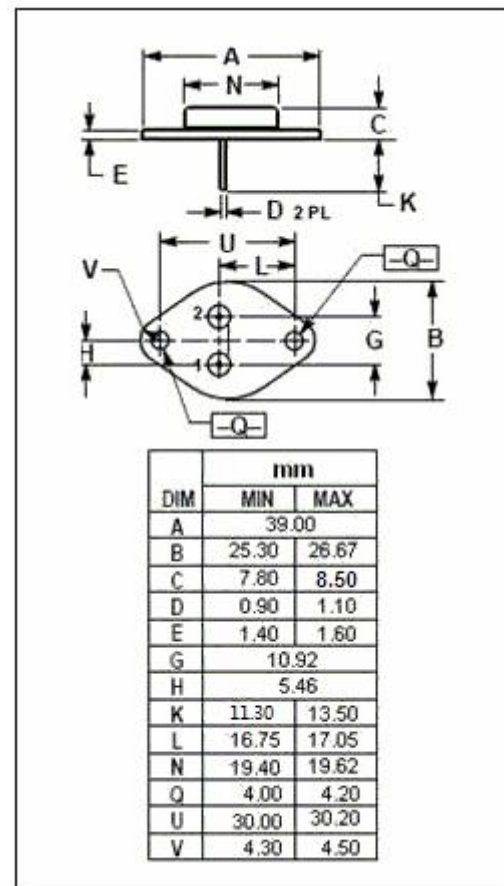
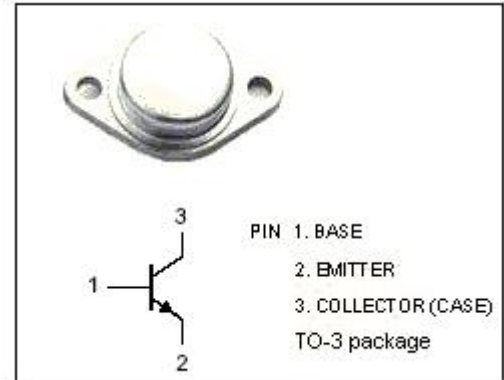
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 350V$ (Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Switching regulator and high voltage switching applications.
- High speed DC-DC converter applications.

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	350	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @ $T_c=25^\circ C$	100	W
T_j	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$



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ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	350			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	500			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	6			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A			2.0	V
h _{FE}	DC Current Gain	I _C = 5A; V _{CE} = 5V	10			
I _{CBO}	Collector Cutoff Current	V _{CB} = 400V; I _E = 0			0.1	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			1.0	mA

Switching Times

t _r	Rise Time	V _{CC} = 200V; I _{B1} = -I _{B2} = 0.5A; R _L = 40 Ω			1.0	μ s
t _{stg}	Storage Time				2.0	μ s
t _f	Fall Time				1.0	μ s

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