

**isc Silicon NPN Power Transistor**
**2SC2838**
**DESCRIPTION**

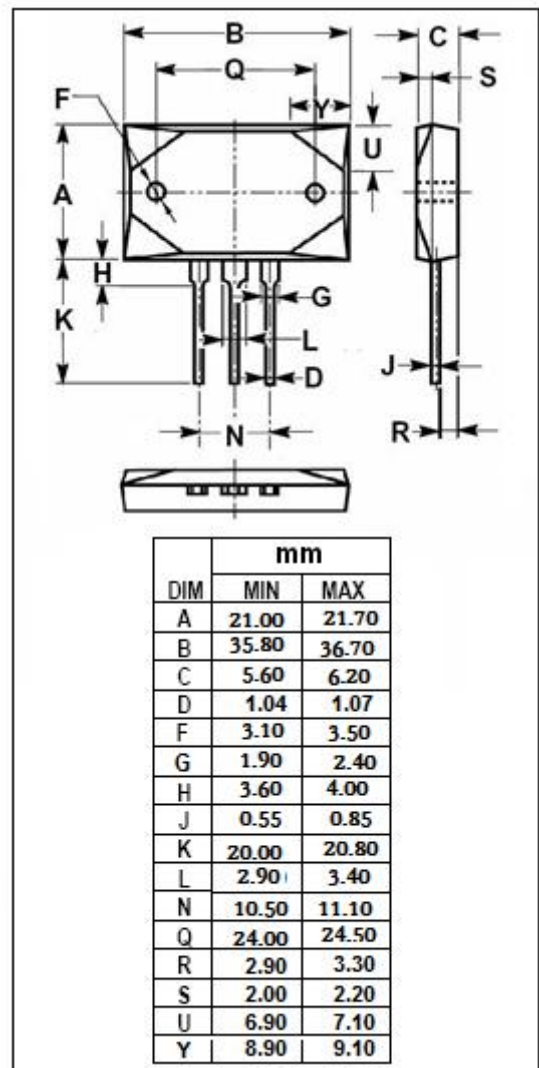
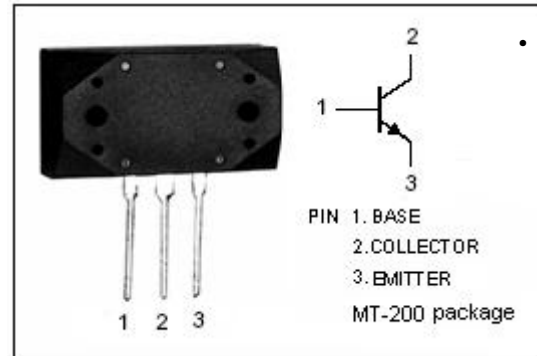
- With MT-200 package
- High power dissipation
- High current capability
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

**APPLICATIONS**

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

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	150	V
$V_{CEO}$	Collector-Emitter Voltage	150	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	12	A
$I_B$	Base Current-Continuous	4	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	120	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



## isc Silicon NPN Power Transistor

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA ; I <sub>B</sub> =0	150			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =1mA ; I <sub>C</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A			1.8	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =0.5A			2.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =150V; I <sub>E</sub> =0			100	μ A
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			100	μ A
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =3A ; V <sub>CE</sub> =4V	60			

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