

isc Silicon NPN Power Transistor
2SD113
DESCRIPTION

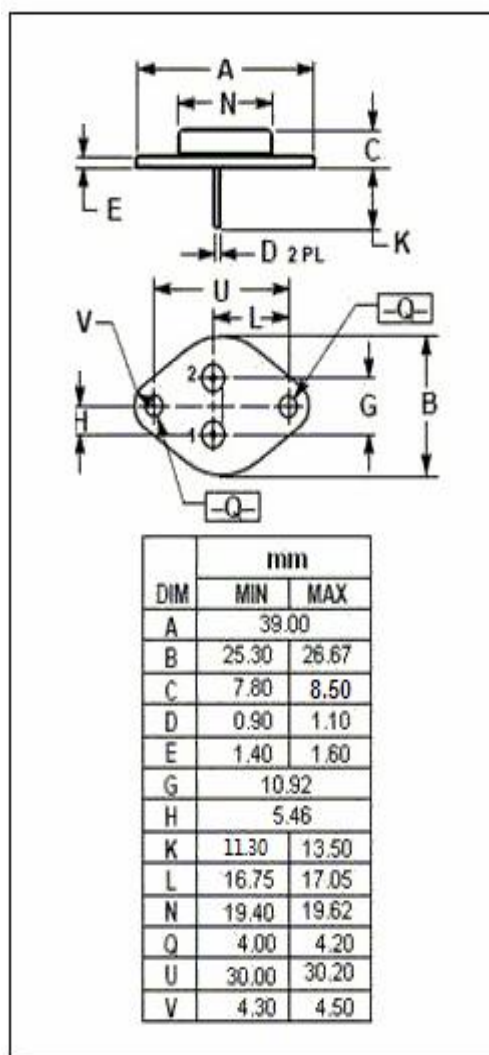
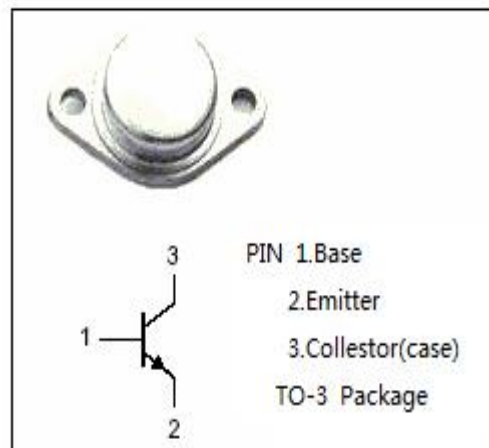
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V$ (Min)
- High Power Dissipation
- High Current Capability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Audio power amplifier, power switching applications.
- DC-DC converter and regulator applications.

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	30	A
I_E	Emitter Current-Continuous	30	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation @ $T_c=25^\circ C$	200	W
T_j	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$



isc Silicon NPN Power Transistor**2SD113****ELECTRICAL CHARACTERISTICS****T_c=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector- Emitte Breakdown Voltage	I _C = 10mA; R _{BE} = ∞	80			V
V _{(BR)EBO}	Emitte - Base Breakdown Voltage	I _E = 1mA; I _C = 0	10			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 15A; I _B = 3A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 15A; I _B = 3A			2.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V; I _E = 0			2	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 10V; I _C = 0			50	mA
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} = 5V	50		300	
h _{FE-2}	DC Current Gain	I _C = 15A; V _{CE} = 5V	10			
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 50V; f _{test} = 1.0MHz		400		pF
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 10V		1.5		MHz

◆ **h_{FE-1} Classifications**

O	Y
50-150	100-300

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