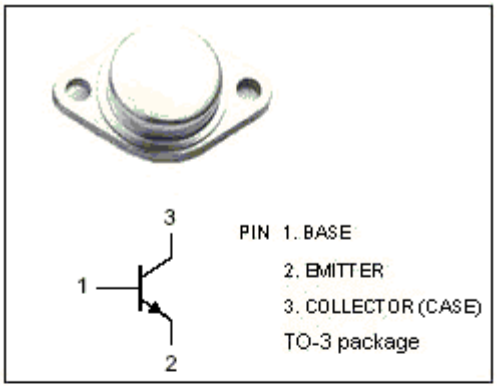
isc Silicon NPN Power Transistor 2SD113

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 80V (Min)
- High Power Dissipation
- High Current Capability

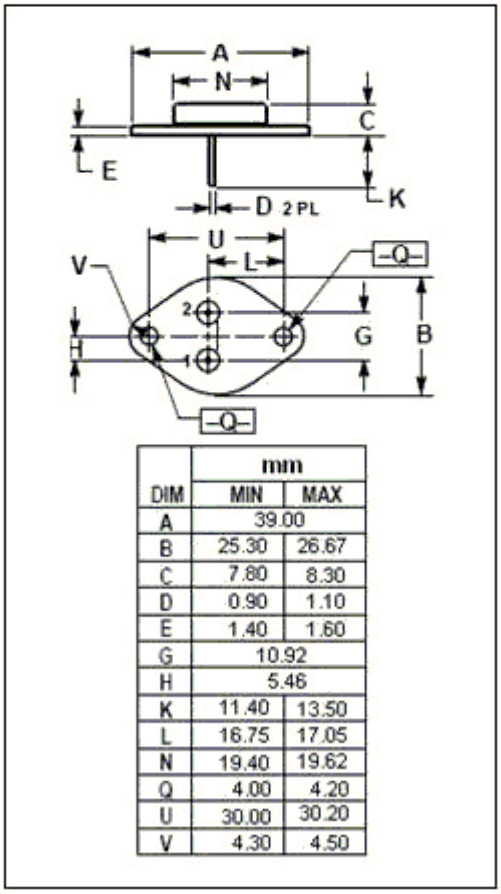


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	200	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 50mA; R_{BE}= ∞	80			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 50mA; 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