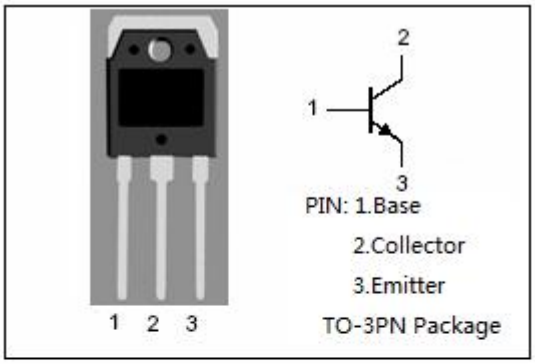
isc Silicon NPN Power Transistor — 2SC3180N



DESCRIPTION

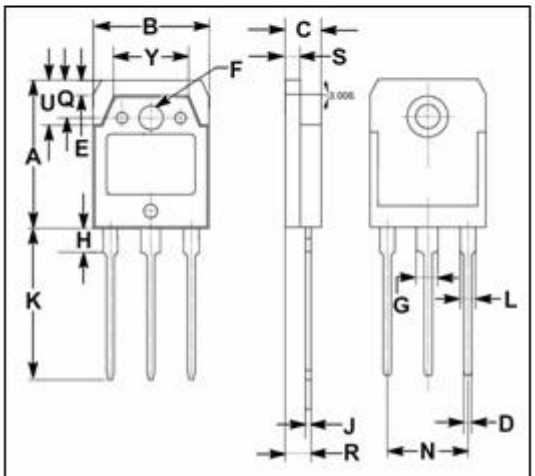
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 2.0V(Max.) @I_C= 5A
- Good Linearity of h_{FE}
- Complement to Type 2SA1263N
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Power amplifier applications
- Recommend for 40W high fidelity audio frequency amplifier output stage applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
I_B	Base Current-Continuous	0.6	A
P_C	Collector Power Dissipation @ T_C=25℃	60	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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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; I_B= 0	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 0.5A			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 3A ; V_{CE}= 5V			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 80V; I_E= 0			5	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			5	μA
h_{FE-1}	DC Current Gain	I_C= 1A; V_{CE}= 5V	55		160	
h_{FE-2}	DC Current Gain	I_C= 3A; V_{CE}= 5V	35			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1.0MHz		105		pF
f_T	Current-Gain—Bandwidth Product	I_C= 1A; V_{CE}= 5V		30		MHz

◆ **h_{FE-1} Classifications**

R	O
55-110	80-160

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