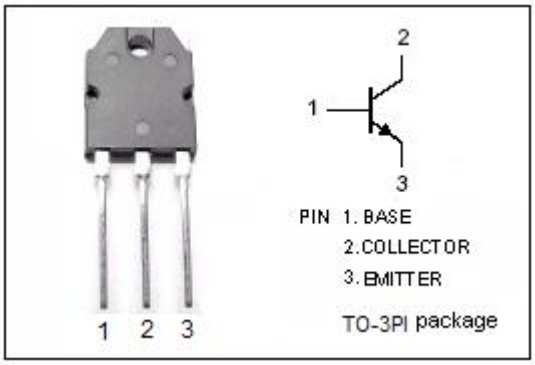
isc Silicon NPN Power Transistor 2SC3181

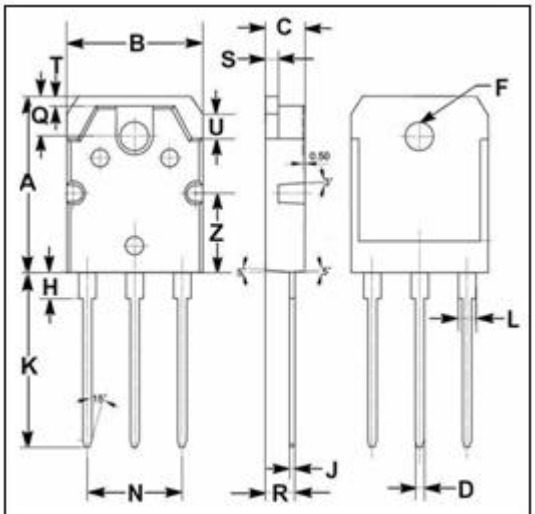


DESCRIPTION

- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 2.0V(Max.) @I_C= 6A
- Good Linearity of h_{FE}
- Complement to Type 2SA1264
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Power amplifier applications
- Recommend for 55W high fidelity audio frequency amplifier output stage applications



DIM	mm MIN	mm MAX
A	19.90	20.10
B	15.50	15.70
C	4.40	4.60
D	0.90	1.10
F	3.20	3.40
H	2.90	3.10
J	0.50	0.70
K	19.90	20.10
L	1.90	2.10
N	10.80	11.00
Q	4.40	4.60
R	3.30	3.35
S	1.40	1.60
T	1.00	1.20
U	2.10	2.30
Z	8.90	9.10

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	120	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	8	A
I_B	Base Current-Continuous	0.8	A
P_C	Collector Power Dissipation @ T_C=25℃	80	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

isc Silicon NPN Power Transistor 2SC3181

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	120			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 6A; I_B= 0.6A			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 4A; V_{CE}= 5V			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 120V; 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= 4A; V_{CE}= 5V	35			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1.0MHz		190		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

Notice：

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.