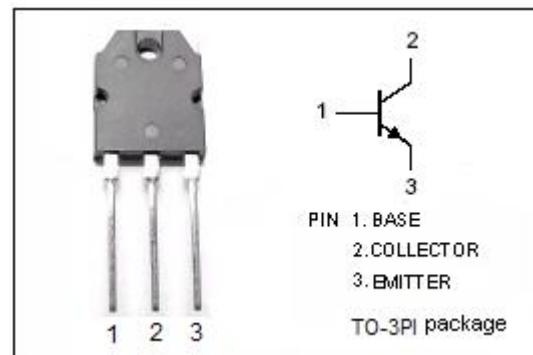


DESCRIPTION

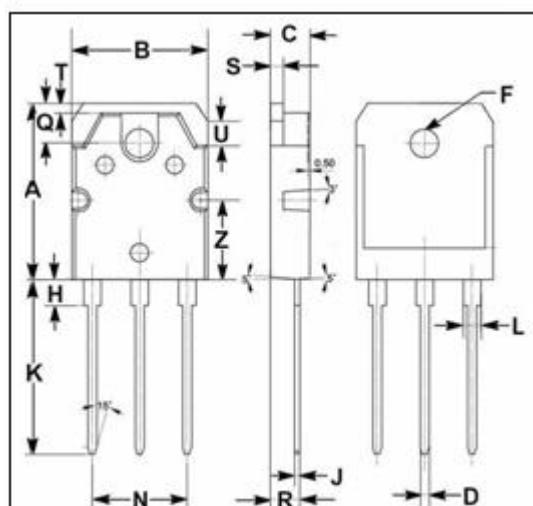
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 2.0V(\text{Max.}) @ I_C = 6A$
- Good Linearity of h_{FE}
- Complement to Type 2SA1264

**APPLICATIONS**

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

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

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 $@ T_c=25^\circ\text{C}$	80	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	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

SPTECH Product Specification

SPTECH Silicon NPN Power Transistor

2SC3181

ELECTRICAL CHARACTERISTICS

T_c=25°C 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 _{CEO}	Collector Cutoff Current	V _{CB} = 120V; I _E = 0			5	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			5	μ A
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

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