New Jersey Semi-Conductor Products, Inc.

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Silicon NPN Power Transistor

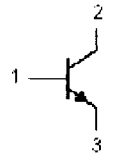
2SC3220

DESCRIPTION

- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 1.0V(Max.)@I_C= 5A
- High Switching Speed

APPLICATIONS

- Designed for power supply and general purpose power amplifier applications.



PIN 1. BASE
2.COLLECTOR
3.EMITTER
TO-247 package

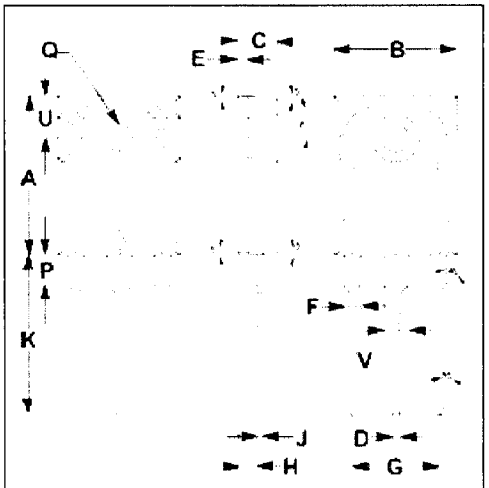
1 2 3

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	230	V
V_{CEO}	Collector-Emitter Voltage	230	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	4	A
I_{BM}	Base Current-Peak	8	A
P_C	Collector Power Dissipation @ T_C=25℃	80	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.56	℃/W



DIM	mm MIN	mm MAX
A	19.80	20.20
B	15.40	15.80
C	4.90	5.10
D	0.90	1.10
E	1.40	1.60
F	1.90	2.10
G	10.80	11.00
H	2.40	2.60
J	0.50	0.70
K	19.50	20.50
P	3.90	4.10
Q	3.30	3.50
U	5.20	5.40
V	2.90	3.10

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 0.2A; I_B= 0	230			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 0.5A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 5A; I_B= 0.5A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 230V; I_E= 0			100	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= 230V; I_B= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0			100	μA
h_{FE}	DC Current Gain	I_C= 10A; V_{CE}= 2V	10			
f_T	Current-Gain—Bandwidth Product	I_C= 1A; V_{CE}= 10V		20		MHz

Switching times

t_{on}	Turn-On Time	I_C= 10A; I_{B1}= 1A; I_{B2}= 2A; R_L= 5Ω; V_{BB2}= 4V			0.3	μs
t_{stg}	Storage Time				0.5	μs
t_f	Fall Time				0.1	μs