New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

Silicon NPN Power Transistor

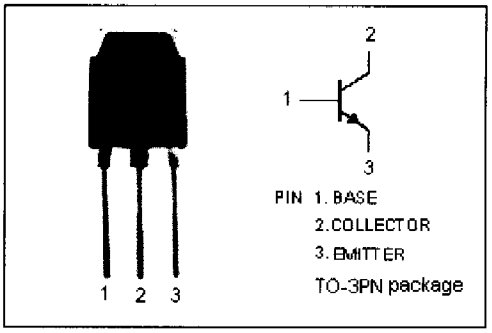
MJH16008

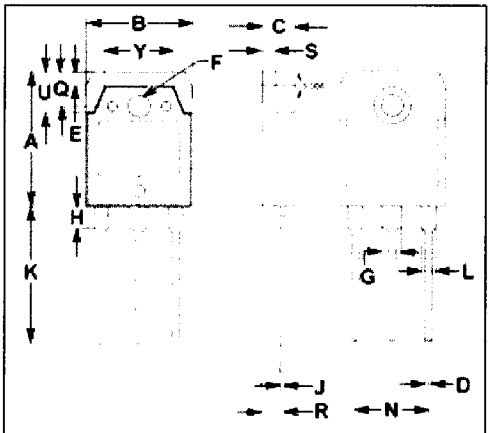
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 450V(Min)
- High Switching Speed

APPLICATIONS

- Designed for high-voltage ,high-speed, power switching in inductive circuits where fall time is critical. They are particularly suited for line operated switch-mode applications.
  Typical applications:
- Switching regulators
- Inverters
- Solenoid and relay drivers
- Motor controls
- Deflection circuits





DIM	mm MIN	MAX
A	19.90	20.10
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	3.10
H	3.20	3.40
J	0.595	0.605
K	20.50	20.70
L	1.90	2.10
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.005
U	5.90	6.10
Y	9.90	10.10

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage	850	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	16	A
I_B	Base Current-Continuous	6	A
I_{BM}	Base Current-Peak	12	A
P_C	Collector Power Dissipation @T_C=25℃	125	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.0	℃/W

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C=100mA ; I_B=0	450			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 0.3A			2.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 0.5A I_C= 5A; I_B= 0.5A,T_C=100℃			3.0 3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 5A; I_B= 0.5A I_C= 5A; I_B= 0.5A,T_C=100℃			1.5 1.5	V
I_{CEV}	Collector Cutoff Current	V_{CEV}=850V;$V_{BE(off)}$=1.5V V_{CEV}=850V;$V_{BE(off)}$=1.5V;T_C=100℃			0.25 1.5	mA
I_{CER}	Collector Cutoff Current	V_{CE}= 850V; R_{BE}= 50 Ω ,T_C= 100℃			2.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C=0			1.0	mA
h_{FE}	DC Current Gain	I_C= 8A ; V_{CE}= 5V	7			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}=1.0kHz			350	pF

Switching times;Resistive Load

t_d	Delay Time	I_C= 5A , V_{CC}= 250V; R_{B2}= 4 Ω ; I_{B1}= 0.5A; I_{B2}= -1A;PW= 30 μ s; Duty Cycle≤2.0%		20	50	ns
t_r	Rise Time			100	250	ns
t_s	Storage Time			900	2200	ns
t_f	Fall Time			70	250	ns