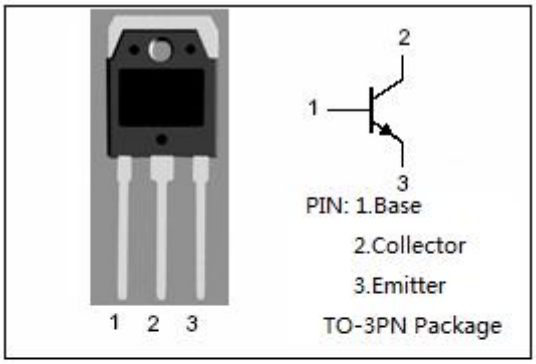
isc Silicon NPN Power Transistor — MJW16018

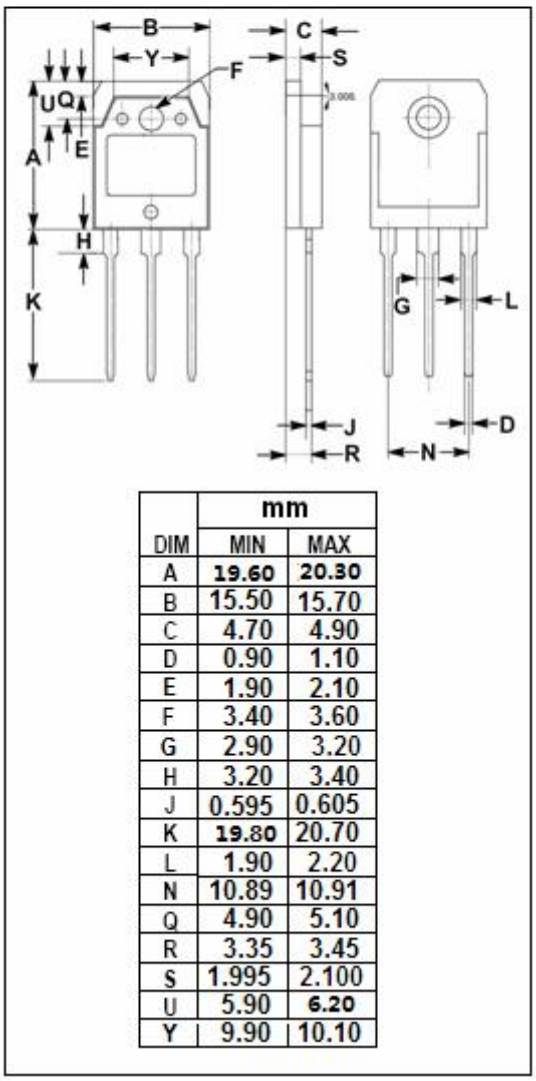
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 800V(Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



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	mm 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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector- Base Voltage	1500	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	800	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current-Continuous	8	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	-55~150	℃

THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C=50mA ; I_B=0	800			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 2A I_C= 5A; I_B= 2A,T_C=100℃			1.0 1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 10A; I_B= 5A			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 5A; I_B= 2A I_C= 5A; I_B= 2A,T_C=100℃			1.5 1.5	V
I_{CBO}	Collector Cutoff Current	V_{CBO}=1500V;I_E=0 V_{CBO}=1500V;I_E=0;T_C=100℃			0.25 1.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C=0			0.1	mA
h_{FE}	DC Current Gain	I_C= 5A ; V_{CE}= 5V	4			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}=1.0kHz		450		pF

Pulsed Test: Pulse duration = 300 ms, duty cycle ≤ 2%

Switching Times

t_d	Delay Time	I_C= 5A ;I_{B1}=-I_{B2}= 2A; V_{CC}= 250V			0.2	μs
t_r	Rise Time				2.0	μs
t_s	Storage Time				9.0	μs
t_f	Fall Time				0.4	μs

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