

isc Silicon NPN Power Transistor

MJH16018

DESCRIPTION

- Collector-Emitter Voltage-
: $V_{CEO(SUS)}= 800V(\text{Min})$
- Fast Turn-Off Time

APPLICATIONS

Designed for high-voltage, high-speed , power switching in inductive circuits where fall time is critical. They are particularly suited for line operated switchmode applications as:

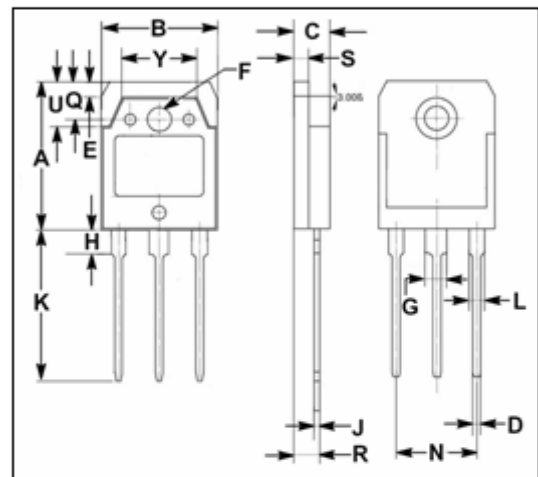
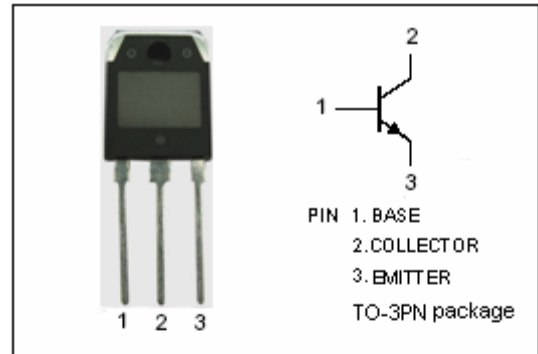
- Switching Regulators
- Inverters
- Solenoids
- Relay Drivers
- Motor Controls
- Deflection Circuits

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter 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 @ $T_c=25^{\circ}\text{C}$	150	W
	Collector Power Dissipation @ $T_c=100^{\circ}\text{C}$	50	
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{(th)j-c}$	Thermal Resistance, Junction to Case	1.0	$^{\circ}\text{C/W}$



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

isc Silicon NPN Power Transistor

MJH16018

ELECTRICAL CHARACTERISTICS

T_j=25°C 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 = 1A I _C = 5A ;I _B = 1A ;T _C =100°C			1.5 2.0	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 10A ;I _B = 4A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 5A ;I _B = 1A I _C = 5A ;I _B = 1A ;T _C =100°C			1.5 1.5	V
I _{CEV}	Collector Cutoff Current	V _{CEV} =1500V, V _{BE(off)} =1.5V V _{CEV} =1500V, V _{BE(off)} =1.5V; T _C =100°C			0.25 1.5	mA
I _{CER}	Collector Cutoff Current	V _{CE} =1500V; R _{BE} =50 Ω ; T _C =100°C			2.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			1.0	mA
h _{FE}	DC Current Gain	I _C = 5A ; V _{CE} = 5V	7			
C _{OB}	Output Capacitance	I _E = 0; f= 1kHz ; V _{CB} = 10V			400	pF

Switching times; Resistive load

t _d	Delay Time	I _C =5A; I _{B1} = 1A; I _{B2} = -2A; V _{CC} = 250V ,R _{B2} = 3 Ω ; PW=30 μ s Duty Cycle ≤2%		0.05	0.1	μ s
t _r	Rise Time			0.3	0.4	μ s
t _s	Storage Time			2	3	μ s
t _f	Fall Time			0.9	1.2	μ s