

Silicon NPN Power Transistor

MJW16018

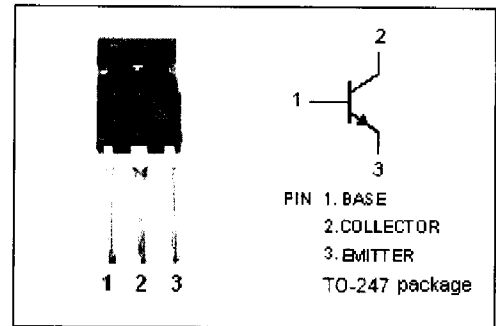
DESCRIPTION

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

APPLICATIONS

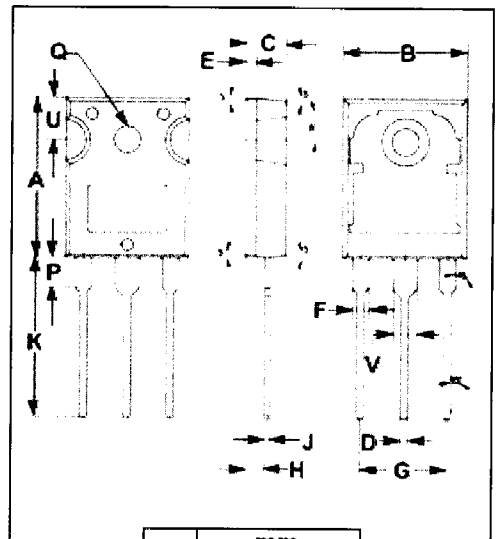
Designed for high-voltage, high-speed, power switching in inductive circuits where fall time is critical. They are particularly suited for line operated switchmode applications as:

- 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 @ $T_c=25^\circ\text{C}$	125	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	$^\circ\text{C}$

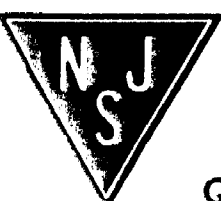


DIM	mm	
	MIN	MAX
A	19.80	20.20
B	15.40	15.80
C	4.90	5.10
D	0.90	1.10
E	1.40	1.60
F	1.90	2.10
G	10.80	11.00
H	2.40	2.60
J	0.50	0.70
K	19.50	20.50
P	3.90	4.10
Q	3.30	3.50
U	5.20	5.40
V	2.90	3.10

THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(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 T _C =100°C			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 T _C =100°C			1.5 1.5	V
I _{CEV}	Collector Cutoff Current	V _{CEV} =1500V, V _{BE(off)} =1.5V T _C =100°C			0.25 1.50	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			0.1	mA
h _{FE}	DC Current Gain	I _C =5A; V _{CE} =5V	4			
C _{OB}	Output Capacitance	f=1kHz; V _{CB} =10V			450	pF

Switching times; Resistive load

t _d	Delay Time	I _C =5A; I _{B1} = I _{B2} = 2A; V _{CC} = 250V, R _{B2} = 3 Ω; PW=25 μ s Duty Cycle ≤ 2%		0.085	0.2	μ s
t _r	Rise Time			0.9	2	μ s
t _s	Storage Time			4.5	9	μ s
t _f	Fall Time			0.2	0.4	μ s