

isc Silicon NPN Power Transistor

MJW18020G

DESCRIPTION

- With TO-247 packaging
- Large collector current
- Low collector saturation voltage
- High power dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

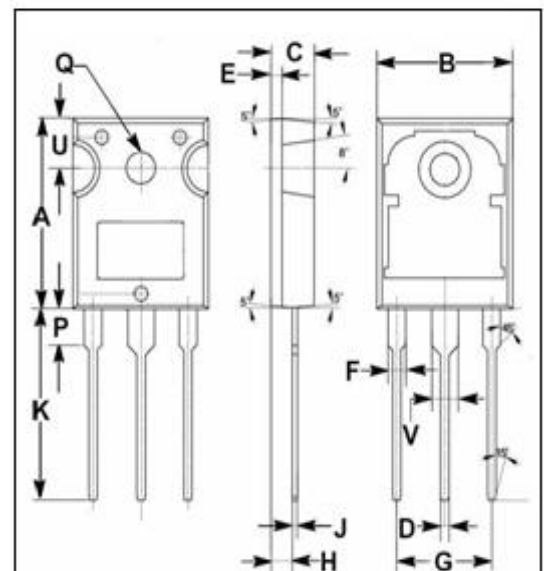
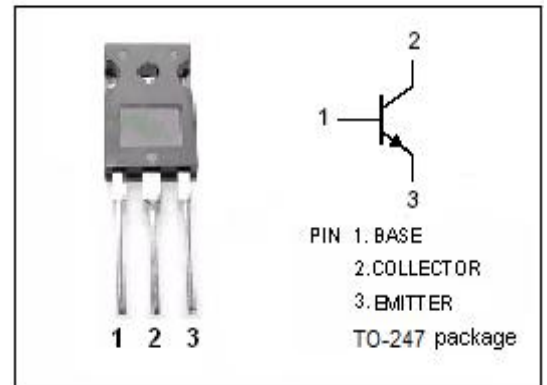
- Designed for use in DC-DC converter
- Driver of solenoid or motor
- For audio amplifier applications

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	1000	V
V _{CEO}	Collector-Emitter Voltage	450	V
V _{EBO}	Emitter-Base Voltage	9.0	V
I _C	Collector Current-Continuous	45	A
I _B	Base Current	10	A
P _C	Collector Power Dissipation@T _C =25°C	250	W
T _J	Junction Temperature	-65~150	°C
T _{stg}	Storage Temperature	-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	0.5	°C/W



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

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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 30mA; I _B = 0	450		V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	1000		V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	9.0		V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C =10A; I _B = 2A		0.6	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C =20A; I _B = 4A		1.5	V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C =10A; I _B = 2A		1.25	V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C =20A; I _B = 4A		1.5	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 800V; I _B =0		1.0	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 1500V; I _E =0		2.0	mA
h _{FE-1}	DC Current Gain	I _C = 3A; V _{CE} = 5V	14	34	
h _{FE-2}	DC Current Gain	I _C = 10A; V _{CE} = 2V	8		
h _{FE-3}	DC Current Gain	I _C = 20A; V _{CE} = 2V	5.5		
h _{FE-4}	DC Current Gain	I _C = 10mA; V _{CE} = 5V	14		

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