

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

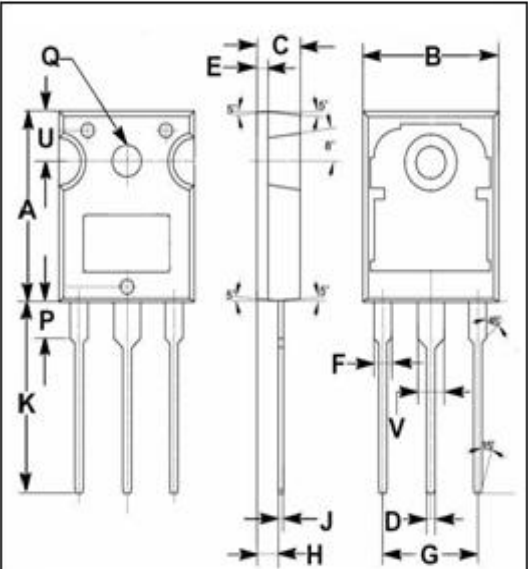
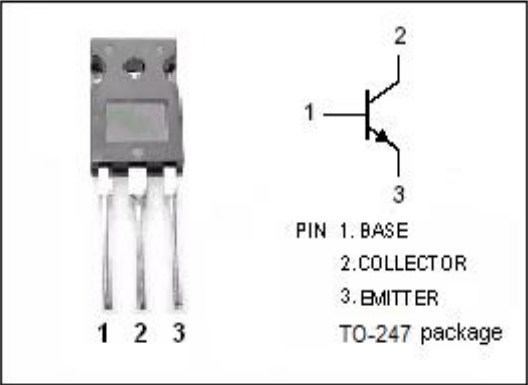
- Designed for use in DC-DC converter
- Driver of solenoid or motor
- For audio amplifier applications

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

isc Silicon NPN Power Transistors**MJW18020G****ELECTRICAL CHARACTERISTICS** **$T_C=25^{\circ}\text{C}$ unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=30\text{mA}; I_B=0$	450		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	1000		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	9.0		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=2\text{A}$		0.6	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=20\text{A}; I_B=4\text{A}$		1.5	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=2\text{A}$		1.25	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C=20\text{A}; I_B=4\text{A}$		1.5	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=800\text{V}; I_B=0$		1.0	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=1500\text{V}; I_E=0$		2.0	mA
h_{FE-1}	DC Current Gain	$I_C=3\text{A}; V_{CE}=5\text{V}$	14	34	
h_{FE-2}	DC Current Gain	$I_C=10\text{A}; V_{CE}=2\text{V}$	8		
h_{FE-3}	DC Current Gain	$I_C=20\text{A}; V_{CE}=2\text{V}$	5.5		
h_{FE-4}	DC Current Gain	$I_C=10\text{mA}; V_{CE}=5\text{V}$	14		