

**isc Silicon NPN Power Transistor**
**NJW21194G**
**DESCRIPTION**

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

**APPLICATIONS**

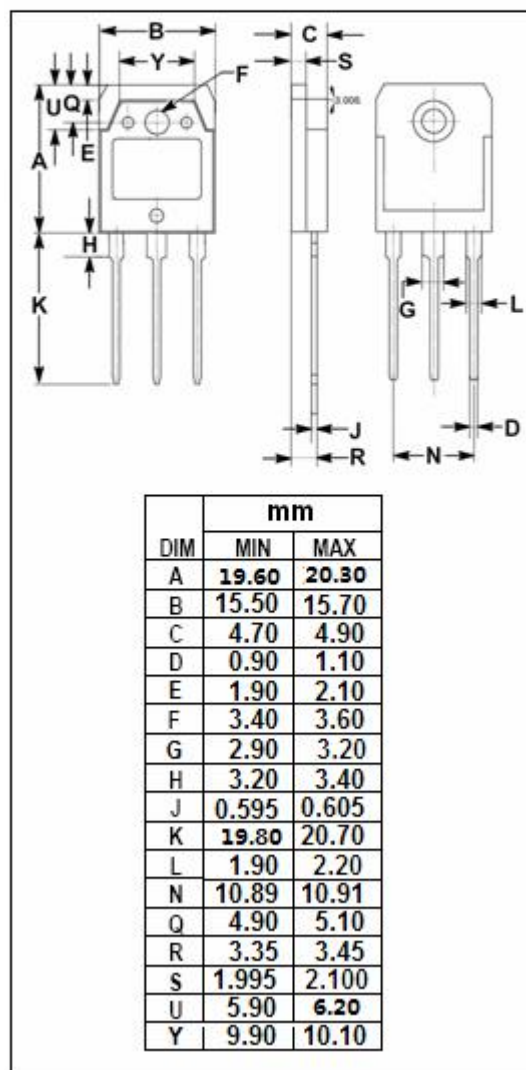
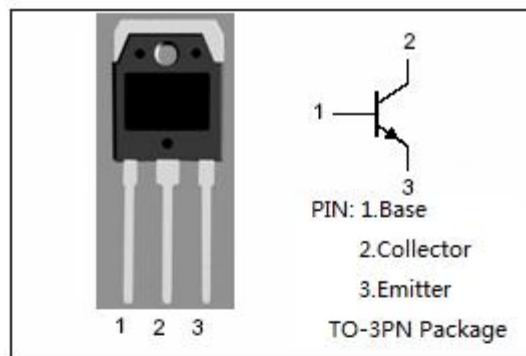
- Designed for use in DC-DC converter
- Driver of solenoid or motor
- For audio amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	400	V
$V_{CEO}$	Collector-Emitter Voltage	250	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current-Continuous	30	A
$I_B$	Base Current	5	A
$P_C$	Collector Power Dissipation@ $T_C=25^{\circ}\text{C}$	200	W
$T_J$	Junction Temperature	-65~150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-65~150	$^{\circ}\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th-j-c}$	Thermal Resistance, Junction to Case	0.625	$^{\circ}\text{C}/\text{W}$



## isc Silicon NPN Power Transistors

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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=30\text{mA}; I_B=0$	250		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	400		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	5.0		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=8\text{A}; I_B=0.8\text{A}$		1.4	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=16\text{A}; I_B=3.2\text{A}$		4.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=8\text{A}; V_{CE}=5\text{V}$		2.2	V
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=250\text{V}; I_B=0$		0.1	mA
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=400\text{V}; I_E=0$		0.1	mA
$h_{FE-1}$	DC Current Gain	$I_C=8\text{A}; V_{CE}=5\text{V}$	20	80	
$h_{FE-2}$	DC Current Gain	$I_C=16\text{A}; V_{CE}=5\text{V}$	8		

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