

# isc Silicon NPN Power Transistor

## MJW21194

### DESCRIPTION

- Total Harmonic Distortion Characterized
- High DC Current Gain –  
 $h_{FE} = 20 \text{ Min @ } I_C = 8 \text{ A dc}$
- Complement to Type MJW21193
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

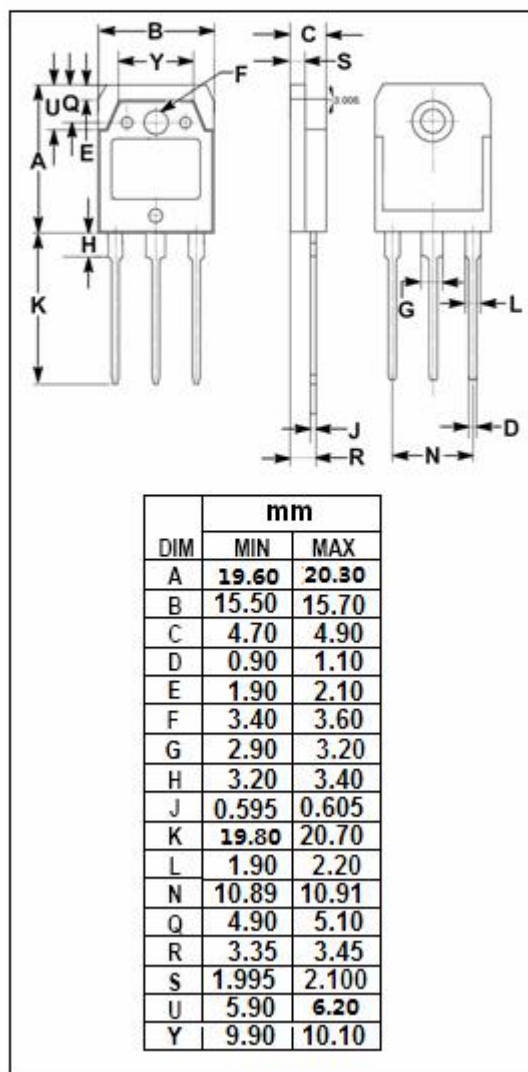
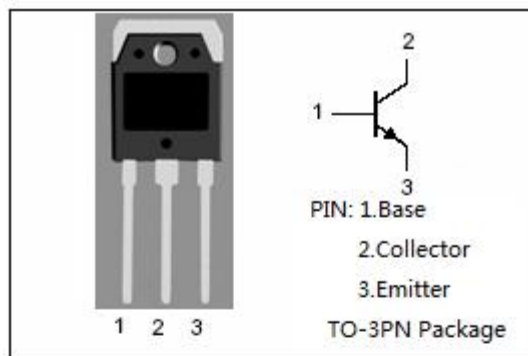
- Designed for high power audio output, disk head positioners and linear applications.

### 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	16	A
$I_{CM}$	Collector Current-Pulse	30	A
$I_B$	Base Current-Continuous	5	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	200	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.7	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	40	$^\circ\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=10\text{mA}$ ; $I_B=0$	250			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
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=400\text{V}$ ; $I_E=0$			100	$\mu\text{A}$
$I_{CEO}$	Collector Cutoff Current	$V_{CE}=200\text{V}$ ; $I_E=0$			100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}$ ; $I_C=0$			100	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C=8\text{A}$ ; $V_{CE}=5\text{V}$	20			
$h_{FE-2}$	DC Current Gain	$I_C=16\text{A}$ ; $V_{CE}=5\text{V}$	8			

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