

**Silicon NPN Power Transistor**

**2N6496**

**DESCRIPTION**

- High Speed- $t_r = 0.5 \mu s$  (Max)
- Low Saturation Voltage-  
 $V_{CE(sat)} = 1.0V$  (Min.) @  $I_C = 8A$

**APPLICATIONS**

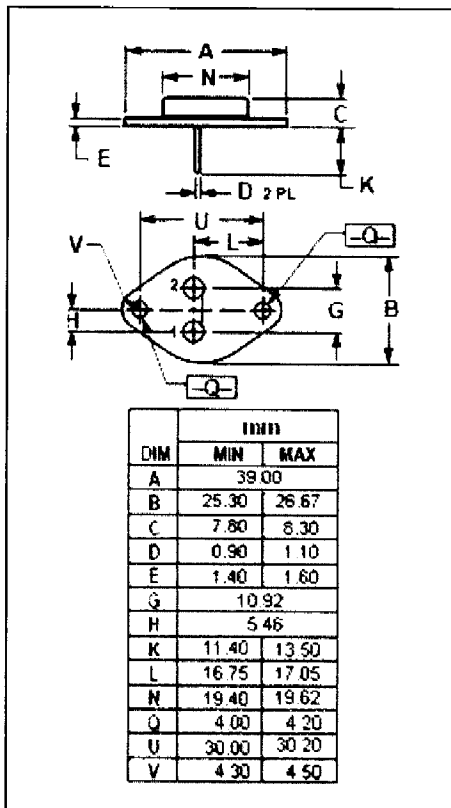
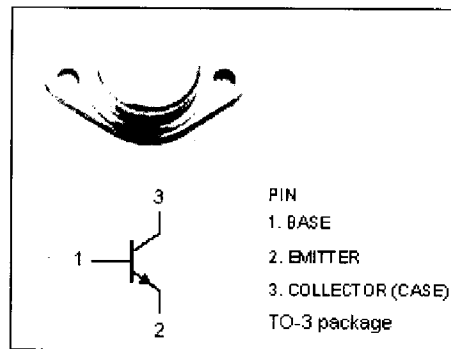
- Designed for use in switching regulators, inverters, wide-band amplifiers and power oscillators in industrial and commercial applications.

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

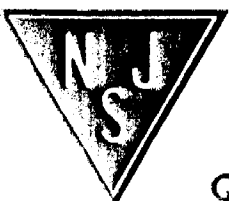
SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector- Base Voltage	150	V
$V_{CER}$	Collector-Emitter Voltage $R_{BE} \leq 50 \Omega$	130	V
$V_{CEO}$	Collector-Emitter Voltage	110	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	15	A
$I_B$	Base Current-Continuous	5	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ C$	140	W
$T_J$	Junction Temperature	200	$^\circ C$
$T_{stg}$	Storage Temperature Range	-65~200	$^\circ C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	1.25	$^\circ C/W$



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## ELECTRICAL CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 200mA; I <sub>B</sub> = 0	110		V
V <sub>CER(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = 200mA; R <sub>BE</sub> ≤ 50 Ω	130		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 8A; I <sub>B</sub> =0.8A		1.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 8A; I <sub>B</sub> =0.8A		2.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = 8A; V <sub>CE</sub> = 2V		1.6	V
I <sub>CEX</sub>	Collector Cutoff Current	V <sub>CE</sub> = 130V; V <sub>BE(off)</sub> =1.5V V <sub>CE</sub> = 130V; V <sub>BE(off)</sub> =1.5V; T <sub>C</sub> =150°C		0.5 10	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> = 0		50	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = 8A; V <sub>CE</sub> = 2V	12	100	

### Switching times

t <sub>r</sub>	Rise Time	V <sub>CC</sub> = 30V, I <sub>C</sub> = 8A, I <sub>B1</sub> = -I <sub>B2</sub> = 0.8A,		0.5	μs
t <sub>s</sub>	Storage Time			1.5	μs
t <sub>f</sub>	Fall Time			0.5	μs