

**Silicon PNP Power Transistor**

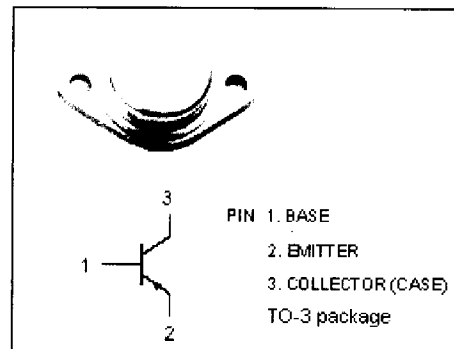
**2SA747**

**DESCRIPTION**

- High Power Dissipation-  
 :  $P_C = 100W(\text{Max.})@T_C=25^\circ\text{C}$
- Collector-Emitter Breakdown Voltage-  
 :  $V_{(BR)CEO} = -120V(\text{Min.})$
- Complement to Type 2SC1116

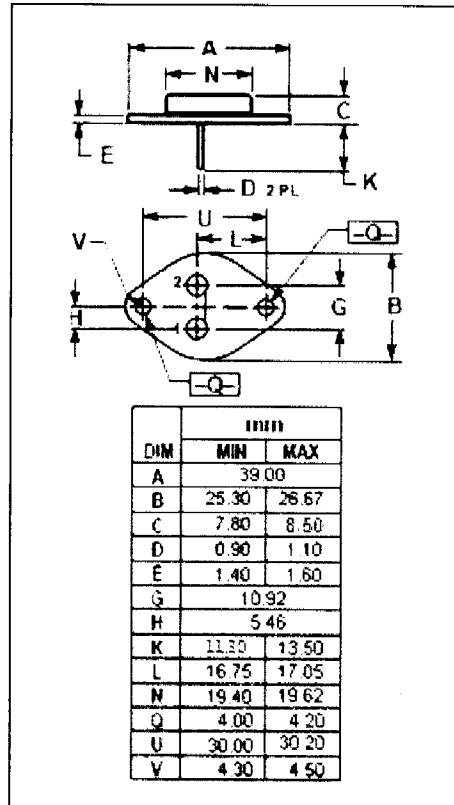
**APPLICATIONS**

- Designed for general purpose applications.

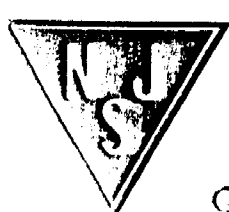


**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-120	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current-Continuous	-10	A
$I_B$	Base Current-Continuous	-4	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	100	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65~150	$^\circ\text{C}$



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2SA747

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -50mA; I <sub>B</sub> = 0	-120			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -5A; I <sub>B</sub> = -0.5A			-2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -120V; I <sub>E</sub> = 0			-1.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -6V; I <sub>C</sub> = 0			-1.0	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = -3A; V <sub>CE</sub> = -4V	30			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>E</sub> = 0.5A; V <sub>CE</sub> = -12V		15		MHz

### Switching times

t <sub>r</sub>	Rise Time	I <sub>C</sub> = -3A, R <sub>L</sub> = 4Ω, V <sub>CC</sub> = -12V I <sub>B1</sub> = -0.2A; I <sub>B2</sub> = 50mA		1.2		μs
t <sub>stg</sub>	Storage Time			3.3		μs
t <sub>f</sub>	Fall Time			0.8		μs