

**Silicon NPN Power Transistor**

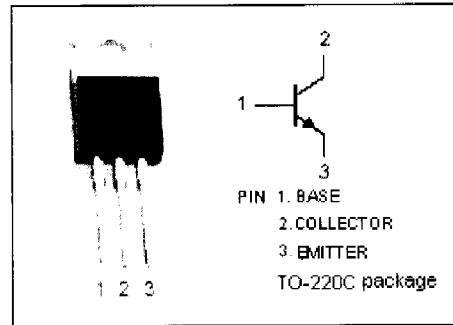
**2SC3317**

**DESCRIPTION**

- Collector-Emitter Sustaining Voltage-  
 $V_{CE0(SUS)} = 400V(\text{Min})$
- Fast Switching Speed

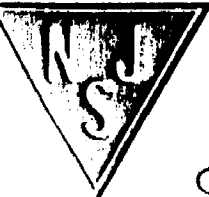
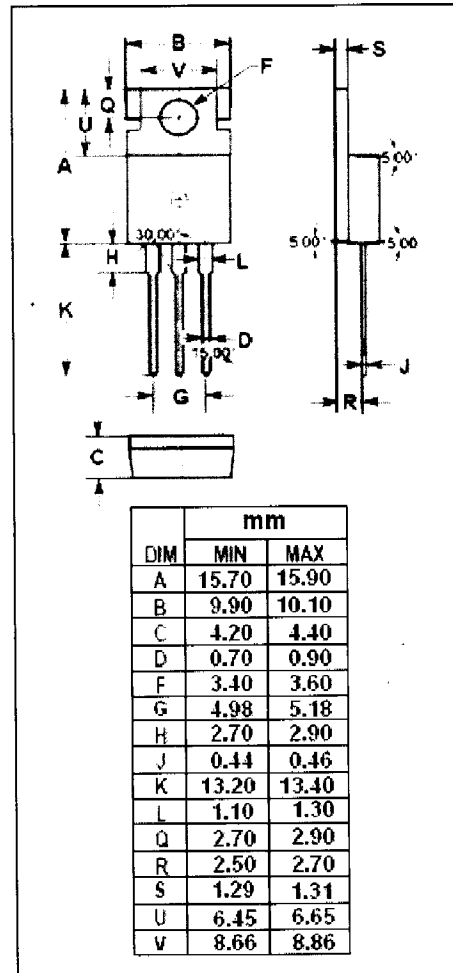
**APPLICATIONS**

- Switching regulators
- Ultrasonic generators
- High frequency inverters
- General purpose power amplifiers



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	500	V
$V_{CEO}$	Collector-Emitter Voltage	400	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	2	A
$I_B$	Base Current-Continuous	0.5	A
$P_C$	Total Power Dissipation @ $T_a = 25^\circ\text{C}$	1.5	W
	Total Power Dissipation @ $T_c = 25^\circ\text{C}$	20	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



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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	$I_C=10\text{mA}; I_B=0$	400		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=1\text{mA}; I_E=0$	500		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.2\text{A}$		1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=1\text{A}; I_B=0.2\text{A}$		1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=400\text{V}; I_E=0$		100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=7\text{V}; I_C=0$		1.0	mA
$h_{FE-1}$	DC Current Gain	$I_C=0.1\text{A}; V_{CE}=5\text{V}$	20		
$h_{FE-2}$	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	8		

### Switching times

$t_r$	Rise Time	$V_{CC}\approx 200\text{V}, R_L=250\Omega,$ $I_{B1}=-I_{B2}=0.08\text{A},$		1.0	$\mu\text{s}$
$t_{stg}$	Storage Time			2.5	$\mu\text{s}$
$t_f$	Fall Time			1.0	$\mu\text{s}$