

**Silicon PNP Power Transistor**

**2SA748**

**DESCRIPTION**

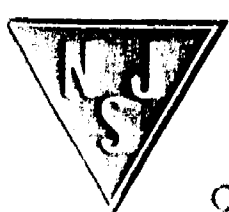
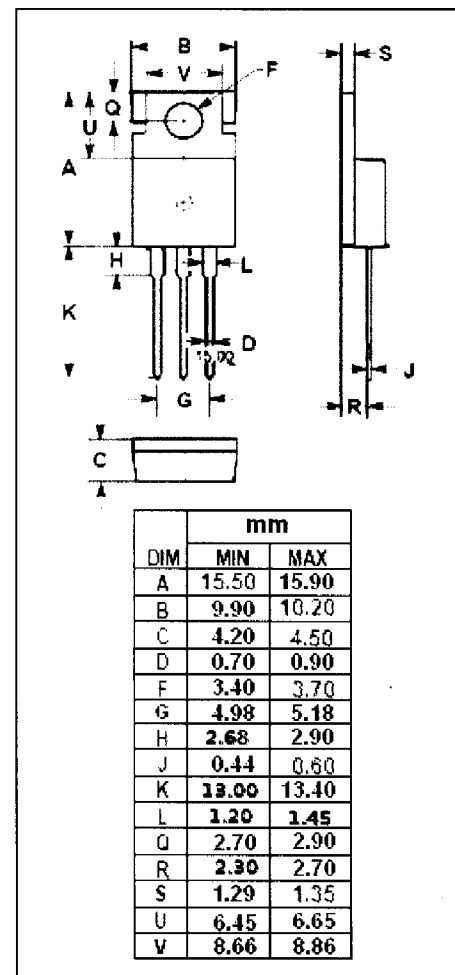
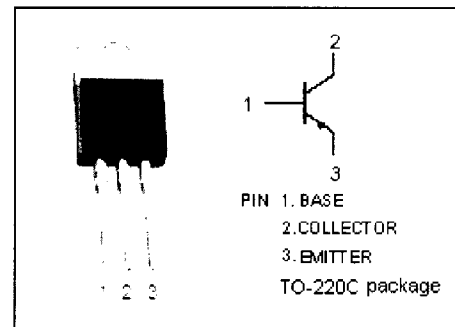
- Collector-Emitter Breakdown Voltage-  
 :  $V_{(BR)CEO} = -50V(\text{Min})$
- Large Power Dissipation-  
 :  $P_C = 15W @ T_C = 25^\circ C$
- Complement to Type 2SC1398

**APPLICATIONS**

- Designed for medium power amplifier applications.

**ABSOLUTE MAXIMUM RATINGS(Ta=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-70	V
$V_{CEO}$	Collector-Emitter Voltage	-50	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-2	A
$I_{CM}$	Collector Current-Peak	-3	A
$P_C$	Total Power Dissipation @ $T_C = 25^\circ C$	15	W
$T_J$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature Range	-55~150	°C



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# 2SA748

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}; I_B = 0$	-50			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -1\text{mA}; I_E = 0$	-70			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -1\text{A}; I_B = -0.1\text{A}$			-1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -2\text{A}; I_B = -0.2\text{A}$			-1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -40\text{V}; I_E = 0$			-1.0	$\mu\text{A}$
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -20\text{V}; I_B = 0$			-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	$I_C = -0.1\text{A}; V_{CE} = -5\text{V}$	30			
$h_{FE-2}$	DC Current Gain	$I_C = -1\text{A}; V_{CE} = -5\text{V}$	50		220	
$f_T$	Current-Gain—Bandwidth Product	$I_C = -500\text{mA}; V_{CE} = -5\text{V}$		120		MHz

### ◆ $h_{FE-2}$ Classifications

P	Q	R
50-100	80-160	120-220