

**Silicon PNP Power Transistor**

**2SA699A**

**DESCRIPTION**

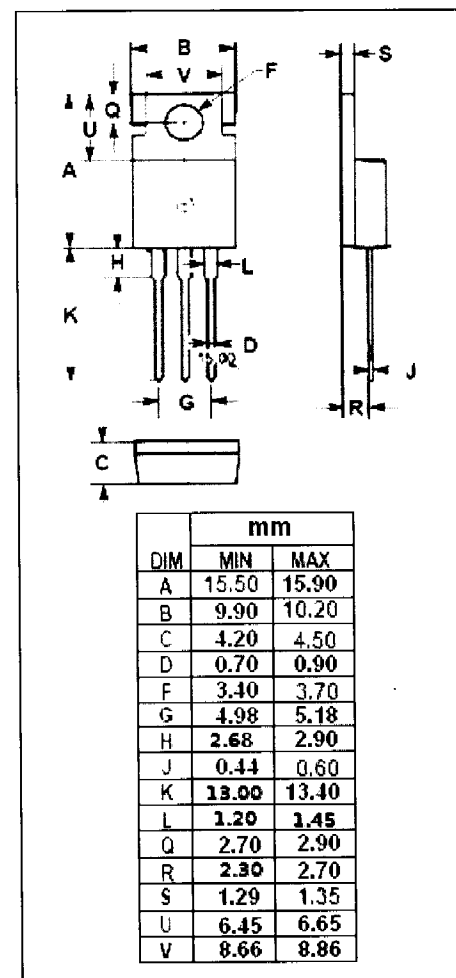
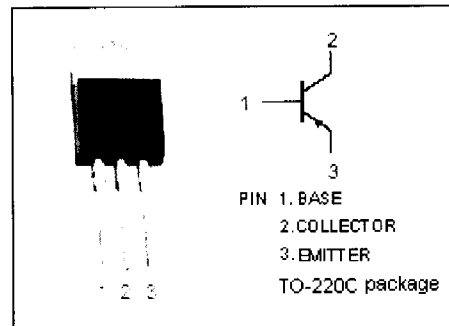
- High Collector Current  $-I_C = -2A$
- Collector-Emitter Breakdown Voltage:  
 $V_{(BR)CEO} = -40V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Low Saturation Voltage
- Complement to Type 2SC1226A

**APPLICATIONS**

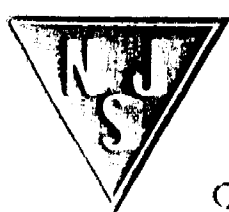
- Designed for medium power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-40	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-2	A
$I_{CP}$	Collector Current-Peak	-3	A
$I_B$	Base Current-Continuous	-0.6	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	10	W
$T_J$	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	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}; I_B = 0$	-40			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -1\text{mA}; I_E = 0$	-50			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -1.5\text{A}; I_B = -0.15\text{A}$			-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	$V_{CB} = -20\text{V}; I_E = 0$			-1.0	$\mu\text{A}$
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -12\text{V}; I_B = 0$			-100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-100	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C = -1\text{A}; V_{CE} = -5\text{V}$	50		220	
$f_T$	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}; V_{CE} = -5\text{V}$		150		MHz
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = -5\text{V}; f_{test} = 1\text{MHz}$		70		pF

### ◆ $h_{FE}$ Classifications

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