

Silicon PNP Power Transistor

2SA1606

DESCRIPTION

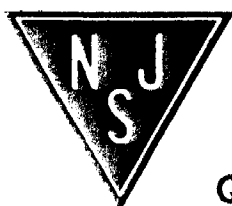
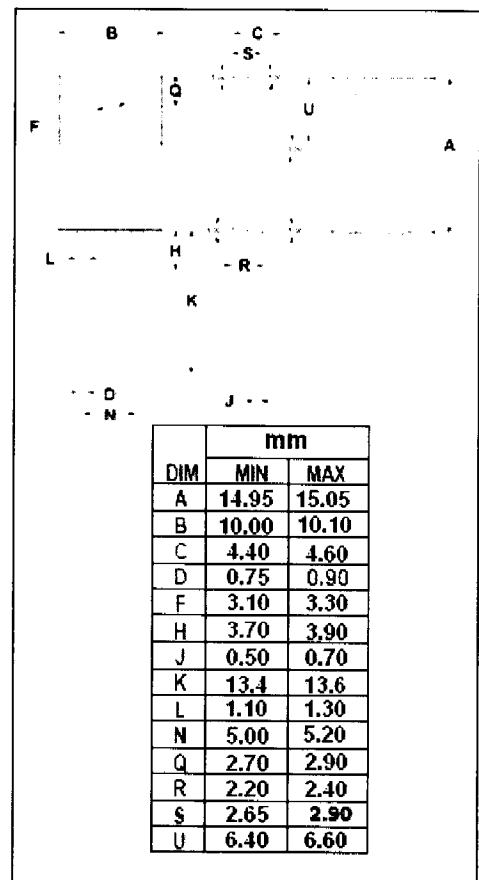
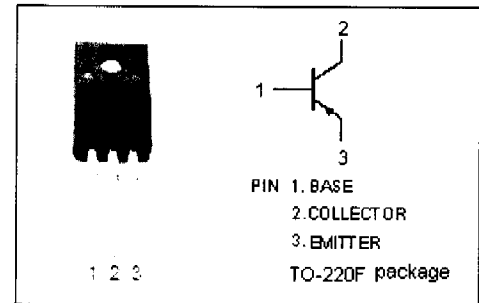
- High Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = -160V$ (Min)
- Large Current Capacity
- Complement to Type 2SC4159

APPLICATIONS

- Designed for high-voltage switching, AF power amplifier,
 100W output predrivers.

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	-180	V
V _{CEO}	Collector-Emitter Voltage	-160	V
V _{EBO}	Emitter-Base Voltage	-6.0	V
I _C	Collector Current-Continuous	-1.5	A
I _{CM}	Collector Current-Peak	-3	A
P _C	Total Power Dissipation @ T _C =25°C	15	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



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Quality Semi-Conductors

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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -1\text{mA}; I_E = 0$	180			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}; R_{BE} = \infty$	160			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -1\text{mA}; I_C = 0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -500\text{mA}; I_B = -50\text{mA}$		-0.5		V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -10\text{mA}; V_{CE} = -5\text{V}$			-1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -120\text{V}; I_E = 0$			-10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -4\text{V}; I_C = 0$			-10	μA
h_{FE}	DC Current Gain	$I_C = -300\text{mA}; V_{CE} = -5\text{V}$	60		200	
f_T	Current-Gain—Bandwidth Product	$I_C = -50\text{mA}; V_{CE} = -10\text{V}$		100		MHz
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}; f = 1.0\text{MHz}$		30		pF

Switching Times

Symbol	Parameter	Conditions	MIN	TYP.	MAX	UNIT
t_{on}	Turn-on Time	$I_C = -0.5\text{A}, R_L = 40\Omega,$ $I_{B1} = -I_{B2} = -50\text{mA}, V_{CC} = -20\text{V};$ $P_W = 20\mu\text{s}$		0.29		μs
t_{stg}	Storage Time			0.48		μs
t_f	Fall Time			0.19		μs

◆ h_{FE} Classifications

D	E
60-120	100-200