

**Silicon PNP Power Transistor**

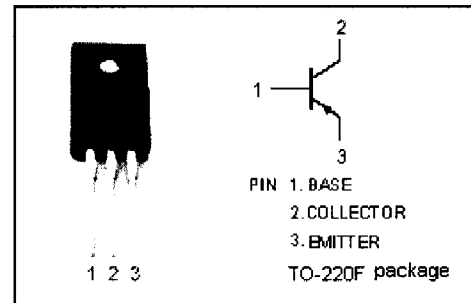
**2SB1642**

**DESCRIPTION**

- Collector-Emitter Breakdown Voltage-  
 :  $V_{(BR)CEO} = -60V(\text{Min})$
- Collector Power Dissipation-  
 :  $P_C = 25 W @ T_C = 25^\circ C$
- Low Collector Saturation Voltage-  
 :  $V_{CE(sat)} = -1.5V(\text{Max}) @ (I_C = -2.5A, I_B = -0.25A)$

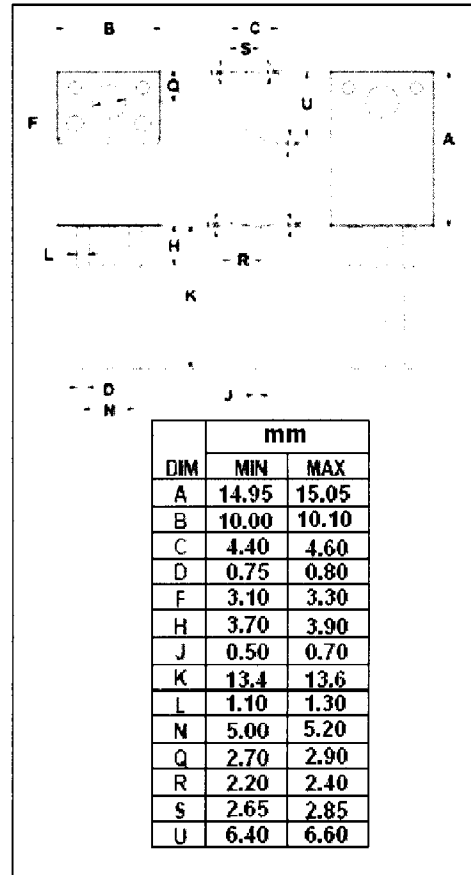
**APPLICATIONS**

- Designed for audio frequency power amplifier applications.

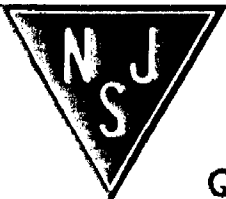


**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ C$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-7	V
$I_C$	Collector Current-Continuous	-4	A
$I_B$	Base Current-Continuous	-1	A
$P_C$	Collector Power Dissipation @ $T_a=25^\circ C$	2	W
	Collector Power Dissipation @ $T_C=25^\circ C$	25	
$T_J$	Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature	-55~150	$^\circ C$



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# 2SB1642

## 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> = -10mA ; I <sub>B</sub> = 0	-60			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -2.5A ; I <sub>B</sub> = -0.25A			-1.5	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = -0.5A ; V <sub>CE</sub> = -5V			-1.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -60V ; I <sub>E</sub> = 0			-10	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -7V ; I <sub>C</sub> = 0			-10	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -0.5A ; V <sub>CE</sub> = -5V	100		320	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -3A ; V <sub>CE</sub> = -5V	20			
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0 ; V <sub>CB</sub> = -10V ; f <sub>test</sub> = 1MHz		50		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = -0.5A ; V <sub>CE</sub> = -5V		9		MHz