

**isc Silicon PNP Power Transistor**
**2SB616**
**DESCRIPTION**

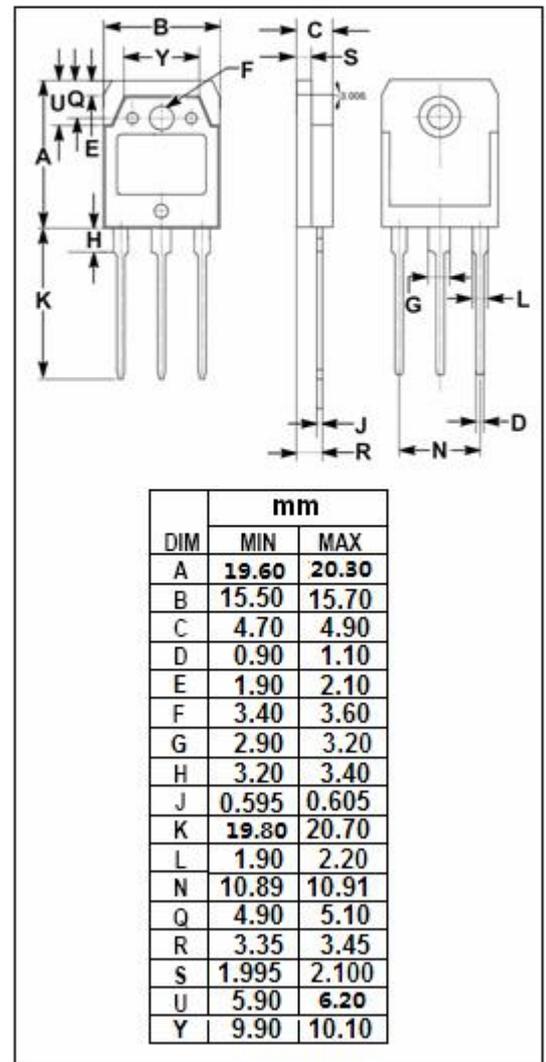
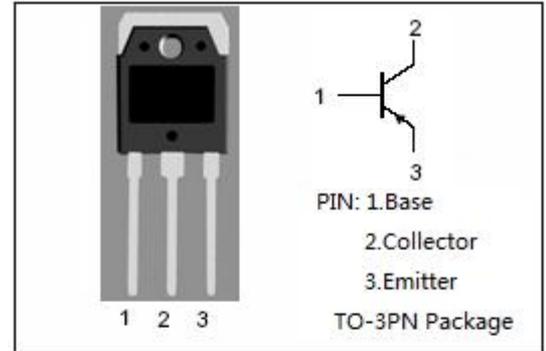
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -100V(\text{Min.})$
- Low Collector Saturation Voltage-  
:  $V_{CE(sat)} = -1.0(\text{Max.}) @ I_C = -2A$
- With TO-3PN package
- Complement to Type 2SD586
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for power amplifiers applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-100	V
$V_{CEO}$	Collector-Emitter Voltage	-100	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-5	A
$P_C$	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	60	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



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**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> = -30mA; R <sub>BE</sub> = ∞	-100			V
V <sub>(BR)CBO</sub>	Collector-Base breakdown voltage	I <sub>C</sub> =-1mA; I <sub>E</sub> = 0	-100			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = -1mA; I <sub>C</sub> = 0	-5			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -3A; I <sub>B</sub> = -0.3A			-1.5	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> =- 1A; V <sub>CE</sub> =-5V			-1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -100V; I <sub>E</sub> = 0			-100	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 5V; I <sub>C</sub> = 0			-100	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = -1A ; V <sub>CE</sub> = -5V	60			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> =-1A ; V <sub>CE</sub> = -5V		15		MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0 ; V <sub>CB</sub> = -10V, f <sub>test</sub> = 1MHz		140		pF

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