

**isc Silicon PNP Power Transistor**
**2SA1659**
**DESCRIPTION**

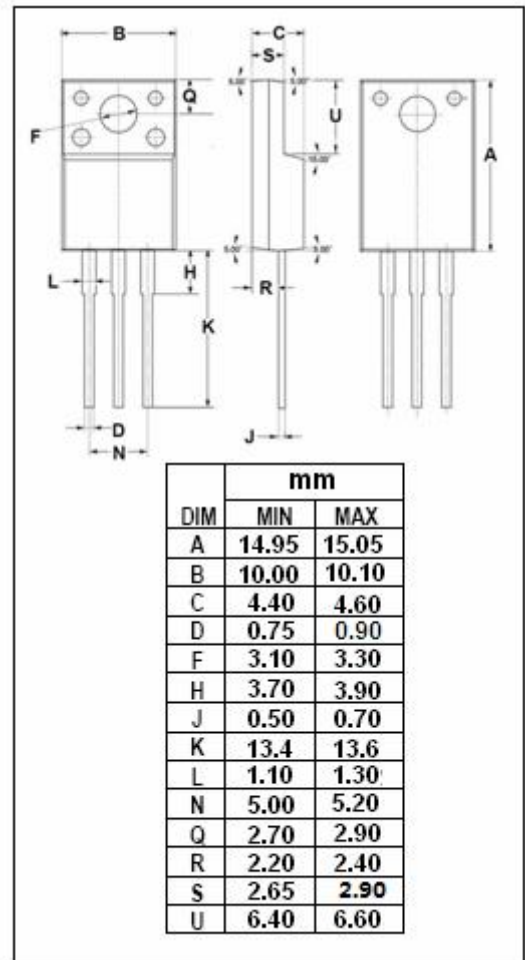
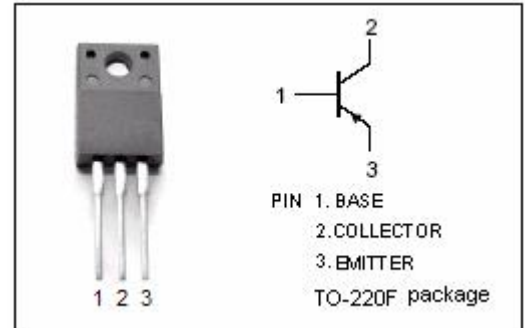
- High Collector-Emitter Breakdown Voltage  
 $V_{CE0} = -160V(\text{Min})$
- Complement to Type 2SC4370
- Full-mold package that does not require an insulating board or bushing when mounting.
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for high voltage applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-160	V
$V_{CEO}$	Collector-Emitter Voltage	-160	V
$V_{EBO}$	Emitter-Base Voltage	-5.0	V
$I_{C(DC)}$	Collector Current(DC)	-1.5	A
$I_{B(DC)}$	Base Current	-0.15	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	20	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



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**ELECTRICAL CHARACTERISTICS**

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}$ ; $I_B = 0$	-160			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -500\text{mA}$ ; $I_B = -50\text{mA}$			-1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -160\text{V}$ ; $I_E = 0$			-1.0	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}$ ; $I_C = 0$			-1.0	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C = -100\text{mA}$ ; $V_{CE} = -5\text{V}$	70		240	
$C_{OB}$	Output Capacitance	$I_E = 0$ ; $V_{CB} = -10\text{V}$ ; $f = 1.0\text{MHz}$		30		pF
$f_T$	Current-Gain—Bandwidth Product	$I_C = -100\text{mA}$ ; $V_{CE} = -10\text{V}$		100		MHz

**◆  $h_{FE}$  Classifications**

O	Y
70-140	120-240

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