

# isc Silicon PNP Power Transistor

## 2SA957

### DESCRIPTION

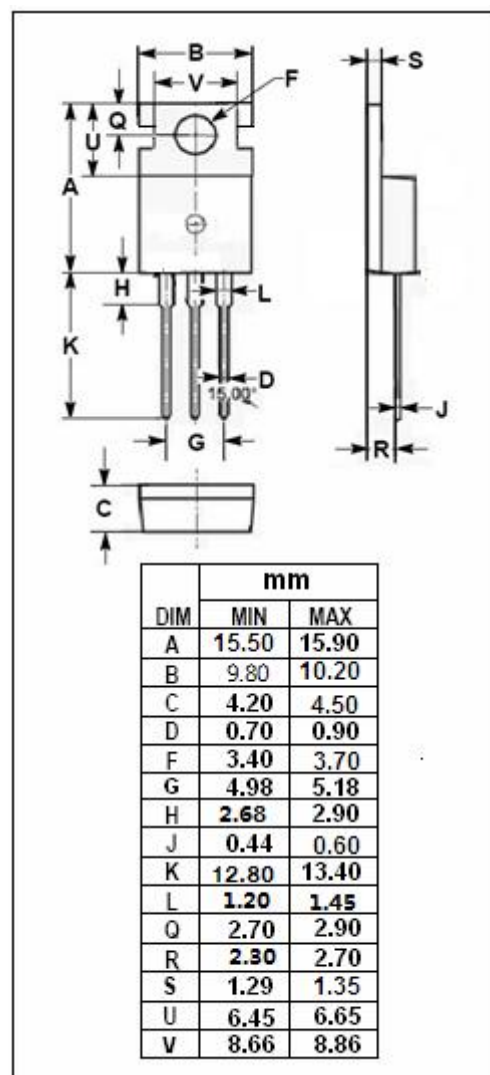
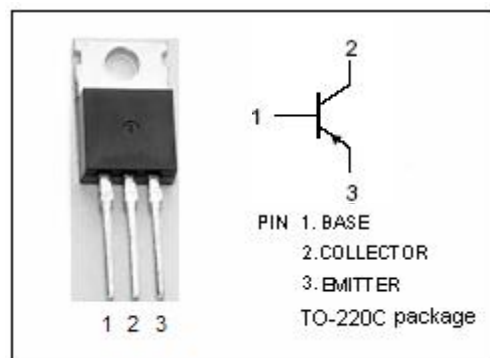
- Collector-Emitter Breakdown Voltage  
:  $V_{(BR)CEO} = -150V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-150	V
$V_{CEO}$	Collector-Emitter Voltage	-150	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current-Continuous	-2	A
$I_B$	Base Current-Continuous	-1	A
$P_C$	Total Power Dissipation @ $T_C=25^{\circ}\text{C}$	30	W
$T_J$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}\text{C}$



**isc Silicon PNP Power Transistor****2SA957****ELECTRICAL CHARACTERISTICS****T<sub>C</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> = -25mA; I <sub>B</sub> = 0	-150			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -0.7A; I <sub>B</sub> = -70mA			-1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -150V; I <sub>E</sub> = 0			-100	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -6V; I <sub>C</sub> = 0			-1.0	mA
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = -0.7A; V <sub>CE</sub> = -10V	40			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>E</sub> = 0.2A; V <sub>CE</sub> = -12V		20		MHz

**Switching times**

t <sub>r</sub>	Rise Time	I <sub>C</sub> = -1A, R <sub>L</sub> = 20 Ω, I <sub>B1</sub> = -I <sub>B2</sub> = -0.1A, V <sub>CC</sub> = -20V		0.4		μ s
t <sub>stg</sub>	Storage Time			1.5		μ s
t <sub>f</sub>	Fall Time			0.5		μ s

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