

isc Silicon NPN Power Transistor
2N6100
DESCRIPTION

- DC Current Gain -
: $h_{FE} = 20-80 @ I_C = 5A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 70V(\text{Min})$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

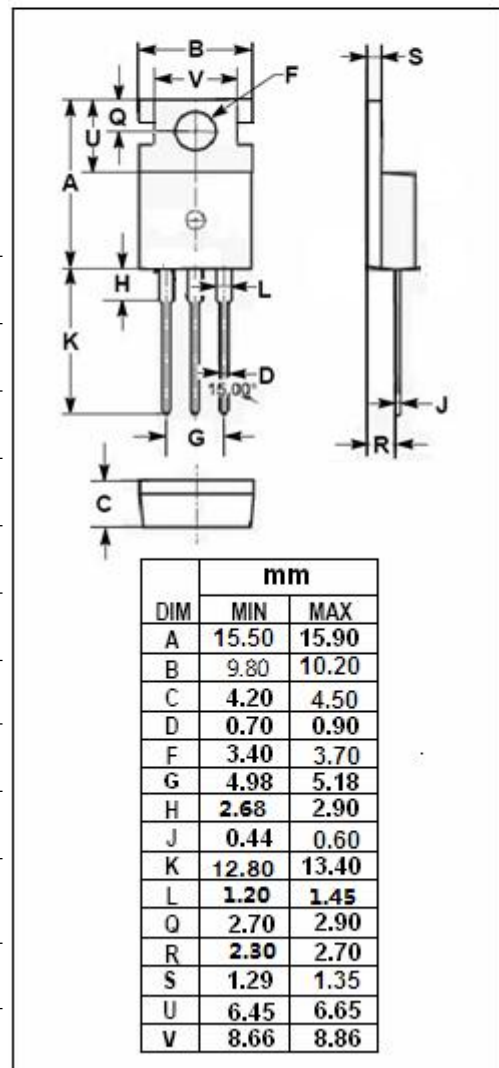
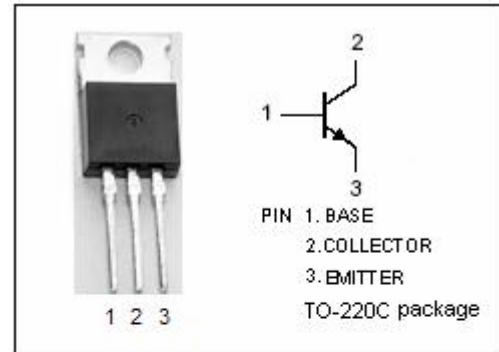
- Designed for use in general-purpose amplifier and switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	70	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	10	A
I_B	Base Current-Continuous	4	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	75	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.67	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEQ(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	70		V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A		1.3	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 10A; I _B = 2.5A		3.5	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 5A ; V _{CE} = 4V		1.3	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 60V; I _B = 0		0.5	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 8V; I _C = 0		1.0	mA
h _{FE}	DC Current Gain	I _C = 5A ; V _{CE} = 4V	20	80	
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A ; V _{CE} = 4V, f _{test} = 0.1MHz	0.8		MHz

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