

isc Silicon PNP Power Transistor

2N6108

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 30-150 @ I_C = -2A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -50V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

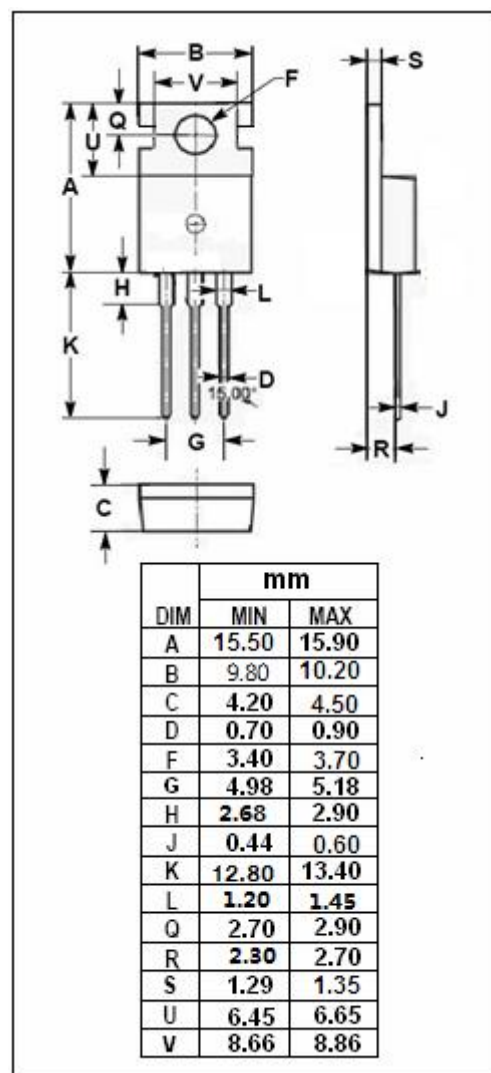
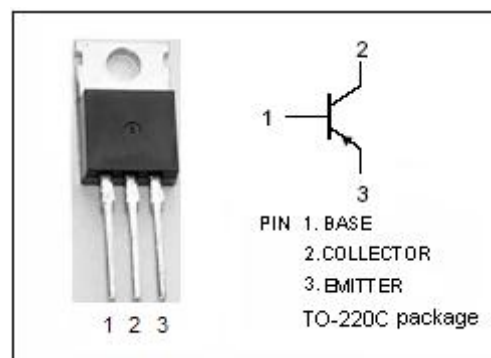
- Designed for use in general-purpose amplifier and switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-7	A
I_{CM}	Collector Current-Peak	-10	A
I_B	Base Current	-3	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	40	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	3.125	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -50\text{mA}$; $I_B = 0$	-50		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -7\text{A}$; $I_B = -3\text{A}$		-3.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -7\text{A}$; $V_{CE} = -4\text{V}$		-3.0	V
I_{CEX}	Collector Cutoff Current	$V_{CE} = -60\text{V}$; $V_{BE(off)} = -1.5\text{V}$ $V_{CE} = -50\text{V}$; $V_{BE(off)} = -1.5\text{V}$; $T_C = 150^{\circ}\text{C}$		-0.1 -2.0	mA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -50\text{V}$; $I_B = 0$		-1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}$; $I_C = 0$		-1.0	mA
h_{FE-1}	DC Current Gain	$I_C = -2\text{A}$; $V_{CE} = -4\text{V}$	30	150	
h_{FE-2}	DC Current Gain	$I_C = -7\text{A}$; $V_{CE} = -4\text{V}$	2.3		
C_{OB}	Output Capacitance	$I_E = 0$; $V_{CB} = -10\text{V}$; $f_{test} = 1\text{MHz}$		250	pF
f_T	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}$; $V_{CE} = -4\text{V}$; $f_{test} = 1\text{MHz}$	10		MHz

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