

isc Silicon PNP Power Transistor

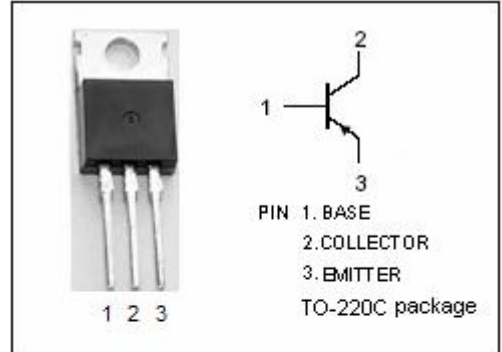
2N6109

DESCRIPTION

- DC Current Gain-
: $h_{FE} = 30-150 @ I_C = -2.5A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = -50V(\text{Min})$

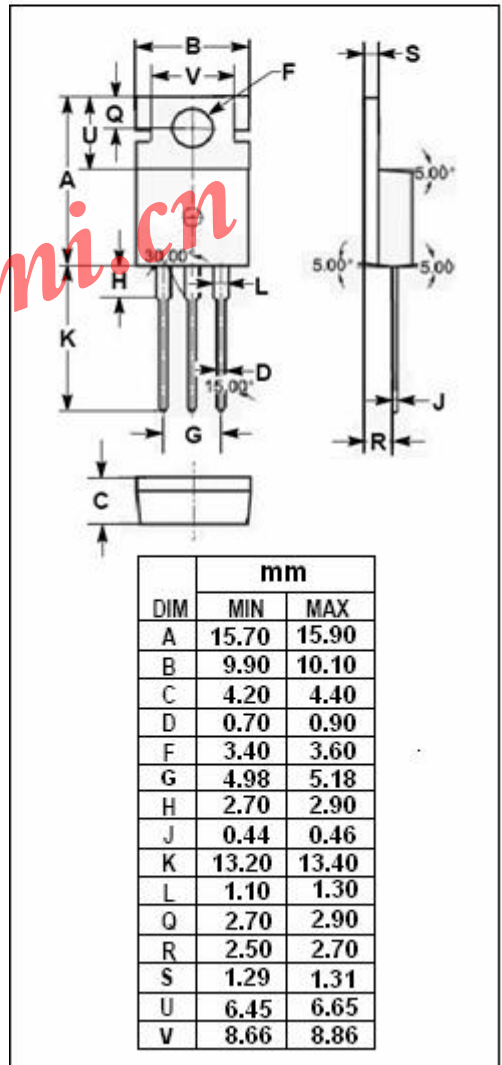
APPLICATIONS

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



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

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 @ $T_C=25^\circ C$	40	W
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ C/W$

isc Silicon PNP Power Transistor**2N6109****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -100\text{mA}; I_B = 0$	-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	$V_{CE} = -40\text{V}; I_B = 0$		-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	$I_C = -2.5\text{A}; V_{CE} = -4\text{V}$	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