

# isc Silicon PNP Power Transistor

# 2N6124

## DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CE(sat)} = -0.6V(\text{Max.}) @ I_C = -1.5A$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = -45V(\text{Min})$
- Complement to Type 2N6121
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

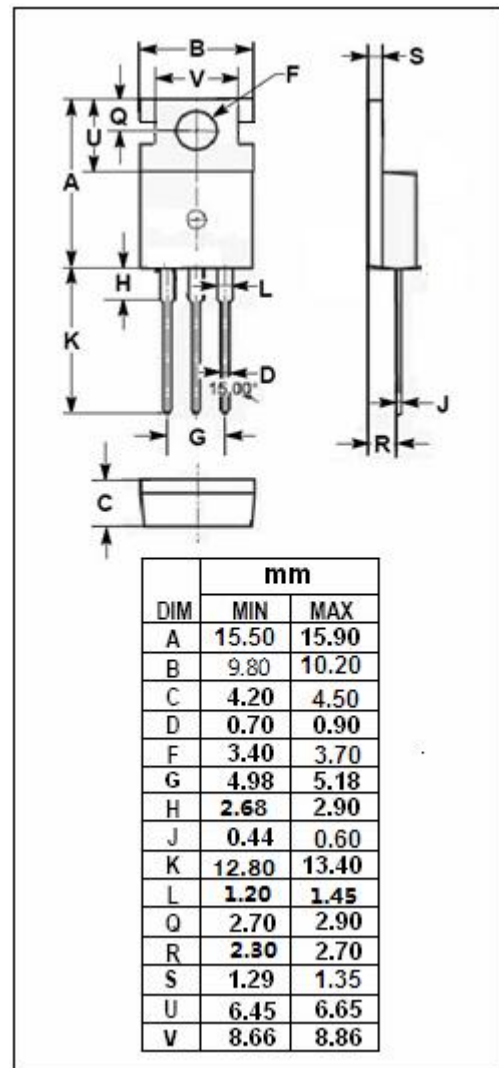
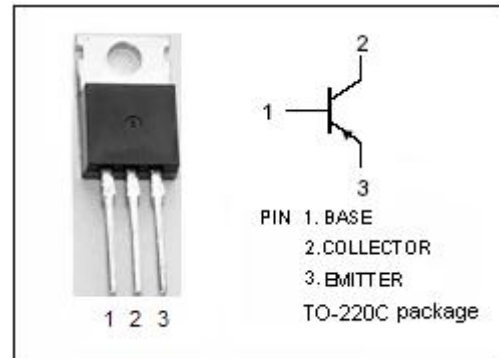
- Designed for use in power amplifier and switching circuits applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-45	V
$V_{CEO}$	Collector-Emitter Voltage	-45	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-4	A
$I_{CM}$	Collector Current-Peak	-8	A
$I_B$	Base Current	-1	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	$^\circ\text{C/W}$



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## ELECTRICAL CHARACTERISTICS

T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = -50mA; I <sub>B</sub> = 0	-45		V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -1.5A; I <sub>B</sub> = -0.15A		-0.6	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -4A; I <sub>B</sub> = -1.0A		-1.4	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = -1.5A; V <sub>CE</sub> = -2V		-1.2	V
I <sub>CEX</sub>	Collector Cutoff Current	V <sub>CE</sub> = -45V; V <sub>BE(off)</sub> = -1.5V V <sub>CE</sub> = -45V; V <sub>BE(off)</sub> = -1.5V; T <sub>C</sub> = 150°C		-0.1 -2.0	mA
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = -45V; I <sub>B</sub> = 0		-1.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0		-1.0	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -1.5A; V <sub>CE</sub> = -2V	25	100	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -4A; V <sub>CE</sub> = -2V	10		
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = -1.0A; V <sub>CE</sub> = -4V, f <sub>test</sub> = 1.0MHz	2.5		MHz

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