

**isc Silicon NPN Power Transistor**
**2N6122**
**DESCRIPTION**

- Collector-Emitter Sustaining Voltage-  
:  $V_{CE(sat)} = 0.6V(\text{Max.}) @ I_C = 1.5A$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 60V(\text{Min})$
- Complement to Type 2N6125
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

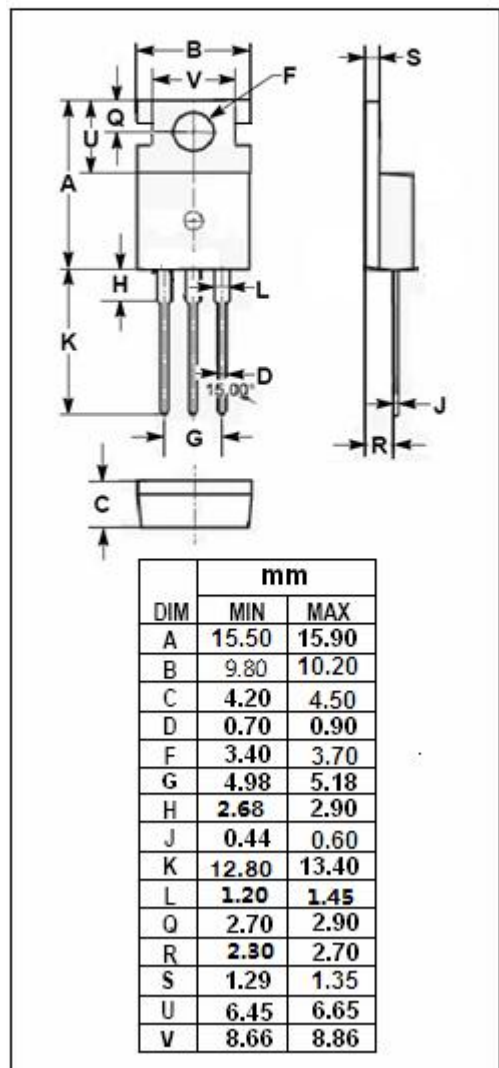
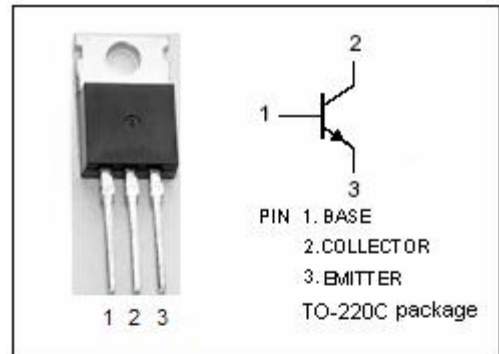
- Designed for use in power amplifier and switching circuits applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	60	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	$^\circ\text{C}/\text{W}$



## isc Silicon NPN Power Transistor

2N6122

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}; I_B=0$	60		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 1.5\text{A}; I_B= 0.15\text{A}$		0.6	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 4\text{A}; I_B= 1.0\text{A}$		1.4	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 1.5\text{A}; V_{CE}= 2\text{V}$		1.2	V
$I_{CEX}$	Collector Cutoff Current	$V_{CE}= 60\text{V}; V_{BE(off)}= 1.5\text{V}$ $V_{CE}= 60\text{V}; V_{BE(off)}= 1.5\text{V}; T_C= 150^{\circ}\text{C}$		0.1 2.0	mA
$I_{CEO}$	Collector Cutoff Current	$V_{CE}= 60\text{V}; I_B= 0$		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	$I_C= 1.5\text{A}; V_{CE}= 2\text{V}$	25	100	
$h_{FE-2}$	DC Current Gain	$I_C= 4\text{A}; V_{CE}= 2\text{V}$	10		
$f_T$	Current-Gain—Bandwidth Product	$I_C= 1.0\text{A}; V_{CE}= 4\text{V}; f_{test}= 1.0\text{MHz}$	2.5		MHz

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