

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Power Transistors

2N4914

DESCRIPTION

- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 1.5V(\text{Max.}) @ I_C = 5A$
- DC Current Gain-
: $h_{FE} = 25-100 @ I_C = 2.5A$
- Complement to Type 2N4905

APPLICATIONS

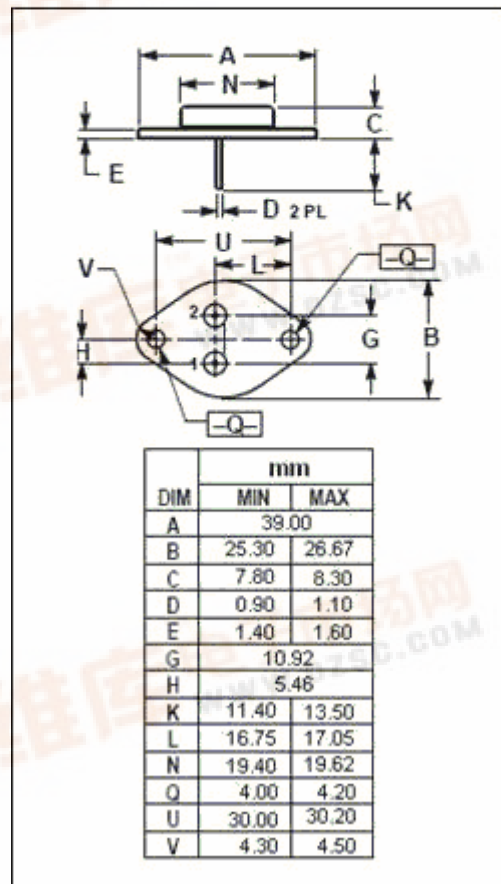
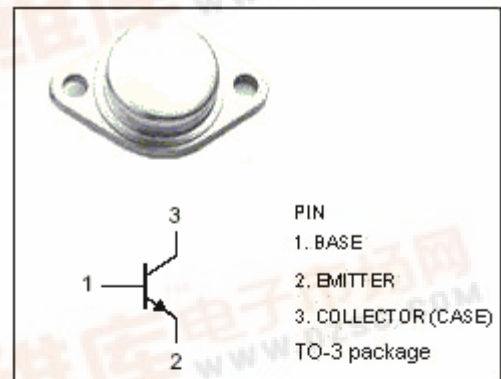
- Designed for general purpose use in power amplifier and switching circuits.

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	5	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation@ $T_C = 25^\circ\text{C}$	87.5	W
T_J	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.0	$^\circ\text{C/W}$



isc Silicon NPN Power Transistors**2N4914****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}$; $I_B=0$	60		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=2.5\text{A}$; $I_B=0.25\text{A}$		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}$; $I_B=1\text{A}$		1.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=2.5\text{A}$; $V_{CE}=2\text{V}$		1.4	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=60\text{V}$; $I_B=0$		1.0	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=60\text{V}$; $I_E=0$		0.1	mA
I_{CEV}	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_{EBO}	Emitter Cutoff Current	$V_{EB}=-5\text{V}$; $I_C=0$		1.0	mA
h_{FE-1}	DC Current Gain	$I_C=2.5\text{A}$; $V_{CE}=2\text{V}$	25	100	
h_{FE-2}	DC Current Gain	$I_C=5\text{A}$; $V_{CE}=2\text{V}$	7		
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}$; $V_{CE}=10\text{V}$; $f_{test}=1.0\text{MHz}$	4		MHz