

**isc Silicon NPN Power Transistors**

**2N4913**

**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 2N4904

**APPLICATIONS**

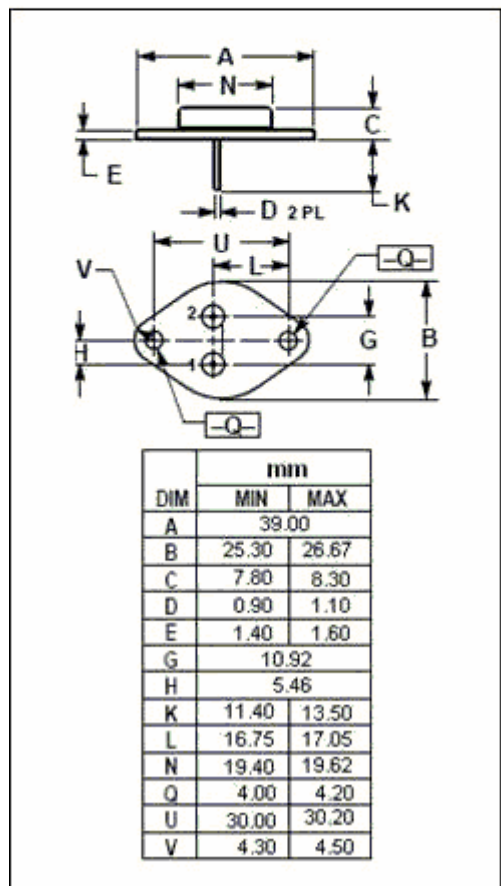
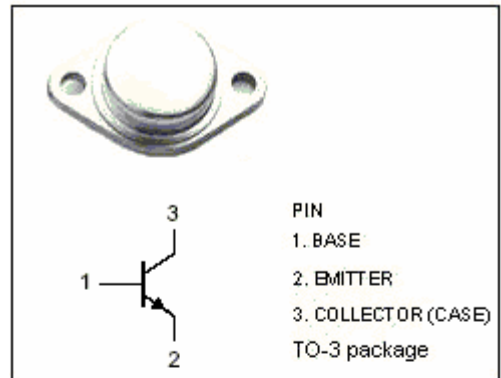
- Designed for general purpose use in power amplifier and switching circuits.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	40	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@ $T_C = 25^\circ C$	87.5	W
$T_J$	Junction Temperature	200	$^\circ C$
$T_{stg}$	Storage Temperature	-65~200	$^\circ C$

**THERMAL CHARACTERISTICS**

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



**isc Silicon NPN Power Transistors****2N4913****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=200\text{mA}; I_B=0$	40		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	$V_{CE}=40\text{V}; I_B=0$		1.0	mA
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=40\text{V}; I_E=0$		0.1	mA
$I_{CEV}$	Collector Cutoff Current	$V_{CE}=40\text{V}; V_{BE(off)}=-1.5\text{V}$ $V_{CE}=40\text{V}; V_{BE(off)}=-1.5\text{V}, T_C=150^\circ\text{C}$		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