

isc Silicon NPN Power Transistor

2N4113

DESCRIPTION

- Excellent Safe Operating Area
- Low Collector-Emitter Saturation Voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

APPLICATIONS

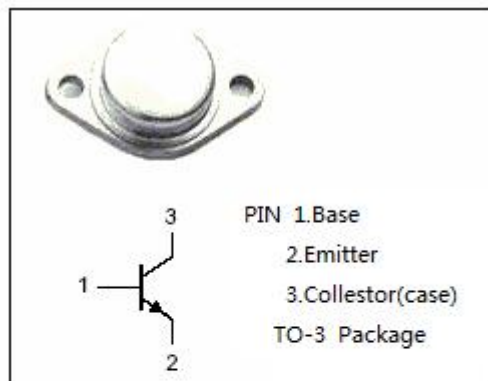
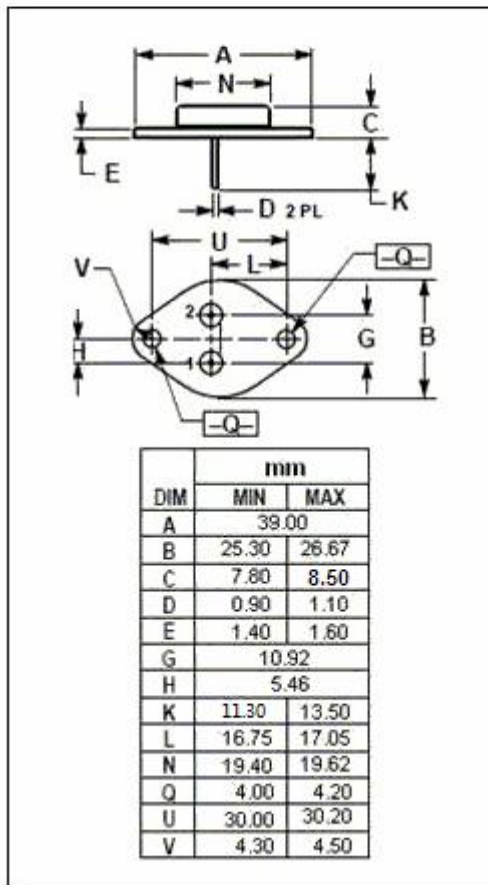
- Designed for general-purpose switching and amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	120	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	5	A
P_C	Collector Power Dissipation@ $T_c=25^{\circ}\text{C}$	30	W
T_J	Operating Temperature Range	$-65\sim+165$	$^{\circ}\text{C}$
T_{stg}	Storage Junction Temperature Range	$-65\sim+165$	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	4.67	$^{\circ}\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}$; $I_B=0$	80		V
I_{CEO}	Collector Cutoff Current	$V_{CE}=60\text{V}$; $I_B=0$		0.1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=8.0\text{V}$; $I_C=0$		1	mA
h_{FE}	DC Current Gain	$I_C=2\text{A}$; $V_{CE}=5\text{V}$	40	120	
f_T	Current Gain-Bandwidth Product	$I_C=0.5\text{A}$; $V_{CE}=10\text{V}$; $f=1.0\text{MHz}$	50		MHz