

## isc Silicon NPN Power Transistor

2N3879

## 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

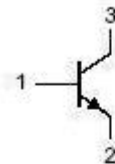
- Designed for high speed switching and linear- amplifier applications.

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	75	V
$V_{EBO}$	Emitter-Base Voltage	7	V
$I_C$	Collector Current-Continuous	7	A
$P_C$	Collector Power Dissipation@ $T_C=25^{\circ}\text{C}$	35	W
$T_J$	Junction Temperature	-65~200	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-65~200	$^{\circ}\text{C}$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5	$^{\circ}\text{C/W}$

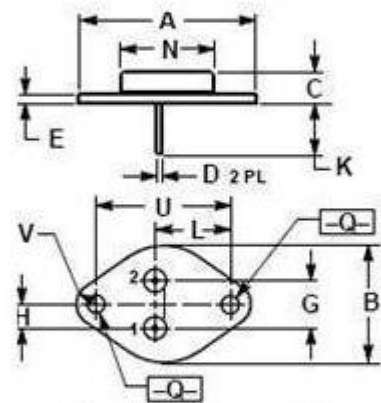


PIN 1. BASE

2. EMITTER

3. COLLECTOR (CASE)

TO-66 package



DIM	mm	
	MIN	MAX
A	31.40	31.80
B	17.30	17.90
C	6.70	7.10
D	0.70	0.90
E	1.40	1.80
G	5.08	
H	2.54	
K	9.80	10.50
L	14.70	14.90
N	12.40	12.70
Q	3.60	3.80
U	24.30	24.50
V	3.50	3.70

**isc Silicon NPN Power Transistor****2N3879****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CEO(SUS)</sub> *	Collector-Emitter Sustaining Voltage	I <sub>C</sub> =200mA; I <sub>B</sub> = 0	75		V
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = 7V; I <sub>C</sub> = 0		10	mA
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 0.4A		1.2	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = 4A; I <sub>B</sub> = 0.4A		2.0	V
h <sub>FE-1</sub> *	DC Current Gain	I <sub>C</sub> = 4A; V <sub>CE</sub> = 2V	12	100	
h <sub>FE-2</sub> *	DC Current Gain	I <sub>C</sub> = 4A; V <sub>CE</sub> = 5V	20	80	
h <sub>FE-3</sub> *	DC Current Gain	I <sub>C</sub> = 0.5A; V <sub>CE</sub> = 5V	40		

\*:Pulse test:Pulse width=300us,duty cycle≤2%

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