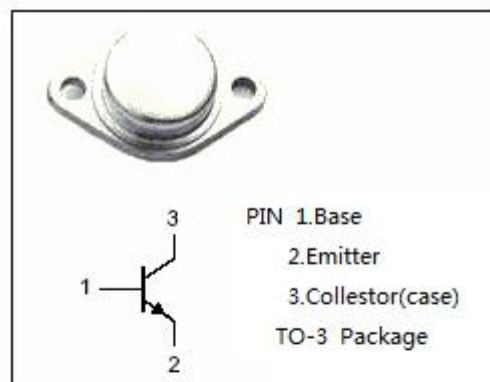


**isc Silicon NPN Power Transistor**
**2SC1027**
**DESCRIPTION**

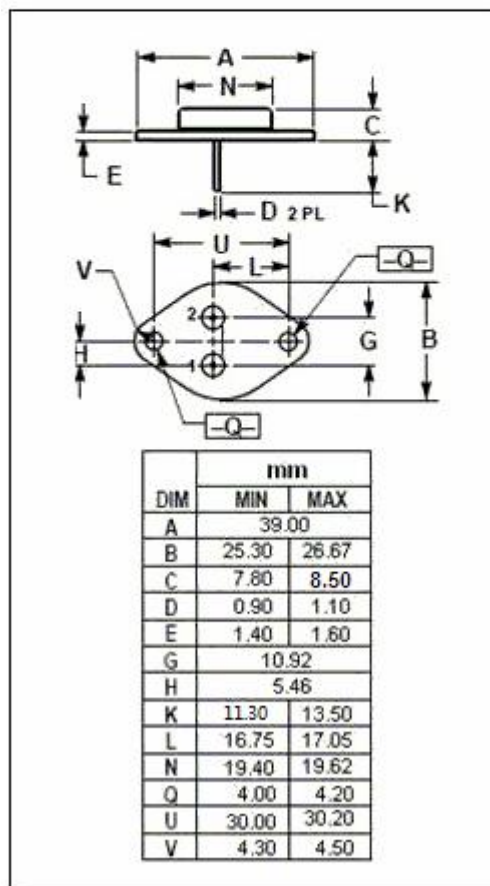
- With TO-3 package
- High power dissipation
- Low collector saturation voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Switching regulators
- DC-DC convertor
- General purpose power amplifiers


**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	250	V
V <sub>CEO</sub>	Collector-Emitter Voltage	80	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>c</sub>	Collector Current-Continuous	6	A
P <sub>c</sub>	Collector Power Dissipation@T <sub>c</sub> =25°C	50	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~+150	°C


**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance,Junction to Case	1.52	°C/W

## isc Silicon NPN Power Transistors

## 2SC1027

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}$ ; $I_B=0$	80		V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1\text{mA}$ ; $I_E=0$	250		V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\text{mA}$ ; $I_C=0$	6		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}$ ; $I_B=0.5\text{A}$		1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{A}$ ; $I_B=0.5\text{A}$		1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=250\text{V}$ ; $I_B=0$		0.1	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=6.0\text{V}$ ; $I_C=0$		0.1	mA
$h_{FE}$	DC Current Gain	$I_C=5\text{A}$ ; $V_{CE}=2\text{V}$	10		

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