

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

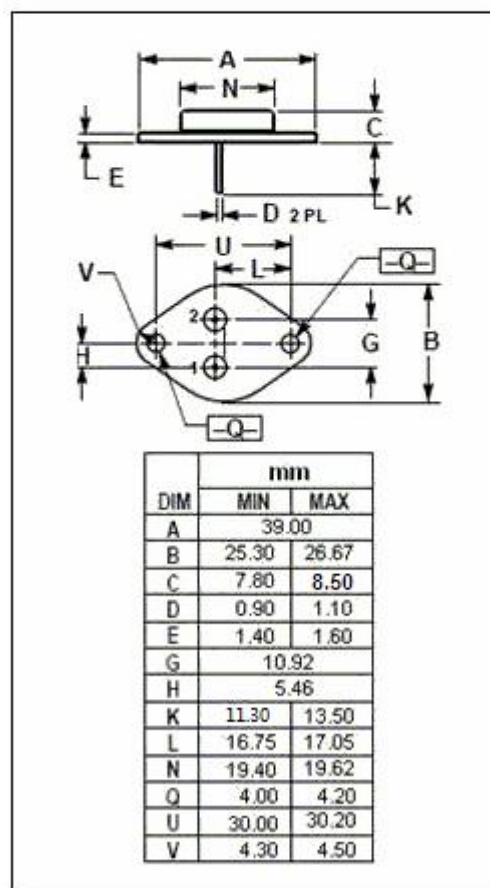
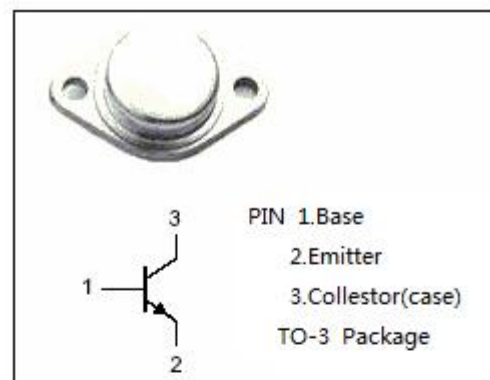
- Switching regulators
- DC-DC convertor
- General purpose power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	250	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	6	A
P_C	Collector Power Dissipation@ $T_C=25^{\circ}\text{C}$	50	W
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.52	$^{\circ}\text{C/W}$



isc Silicon NPN Power Transistors**2SC1027****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	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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