

**isc Silicon NPN Power Transistor**
**2SC3177**
**DESCRIPTION**

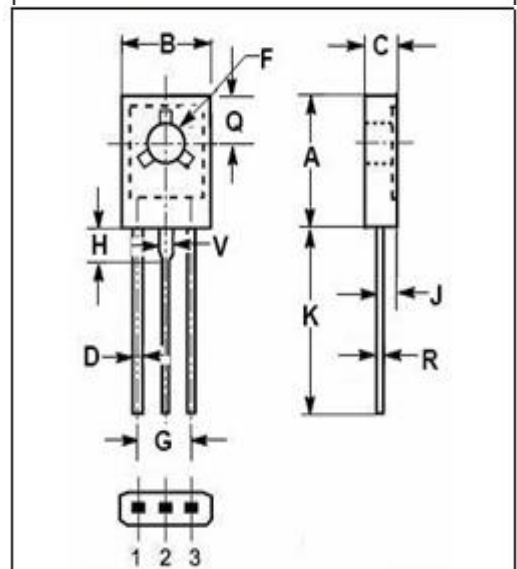
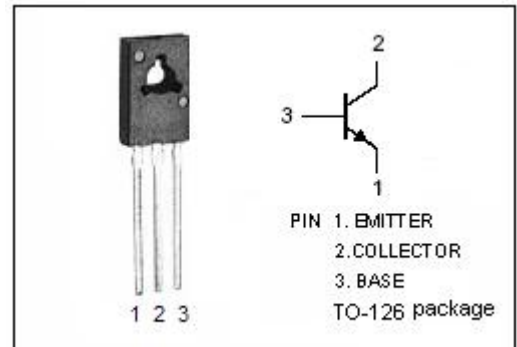
- With TO-126 packaging
- Low collector-to-emitter saturation voltage
- Fast switching speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation.

**APPLICATIONS**

- Relay drivers
- High-speed inverters
- Converters
- Switching applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	15	V
V <sub>CEO</sub>	Collector-Emitter Voltage	15	V
V <sub>EBO</sub>	Emitter-Base Voltage	3	V
I <sub>C</sub>	Collector Current-Continuous	50	mA
P <sub>C</sub>	Collector Power Dissipation	250	mW
T <sub>J</sub>	Junction Temperature	125	°C
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C



DIM	mm	
	MIN	MAX
A	10.70	10.95
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	15.30	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

**isc Silicon NPN Power Transistor****2SC3177****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CBO}$	Collector-Base Voltage	$I_C=0.1\text{mA}$ , $I_E=0$	15			V
$V_{CEO}$	Collector-Emitter Voltage	$I_C=1\text{mA}$ , $I_B=0$	15			V
$V_{EBO}$	Emitter-Base Voltage	$I_E=0.1\text{mA}$ , $I_C=0$	3			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=5\text{mA}$ ; $I_B=0.5\text{mA}$			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=5\text{mA}$ ; $I_B=0.5\text{mA}$			1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB}=10\text{V}$ ; $I_E=0$			1.0	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=3\text{V}$ ; $I_C=0$			1.0	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C=5\text{mA}$ ; $V_{CE}=4\text{V}$	200			

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