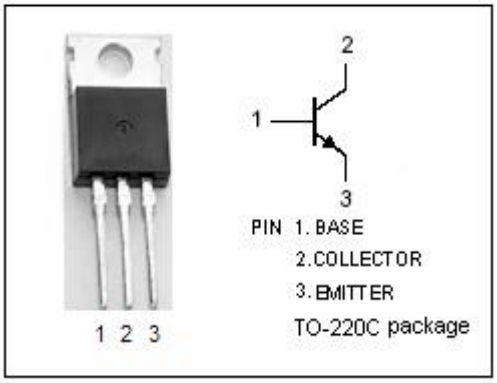
isc Silicon NPN Power Transistor — 2SC2827

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 400V(Min)
- Fast Switching Speed
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 0.7V(Max.)@ I_C= 3A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

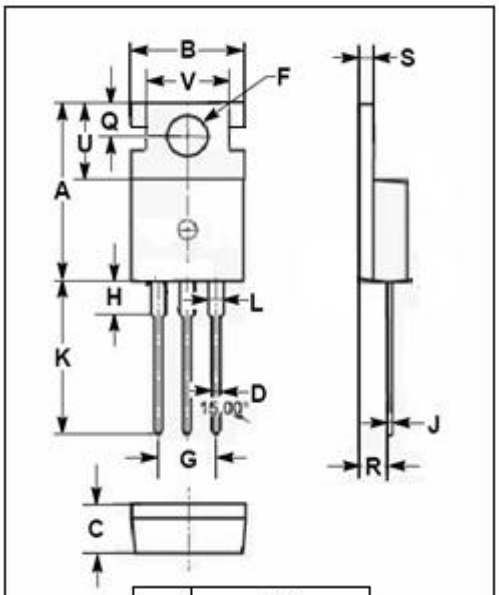
- Designed for use in high-voltage,high-speed,power switching applications such as switching regulators, inverters, solenoid and relay drivers.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	6	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @ T_C=25℃	50	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	3.125	℃/W



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

isc Silicon NPN Power Transistor 2SC2827

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 30mA; I_B= 0	400			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 0.6A			0.7	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 3A; I_B= 0.6A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 500V; I_E= 0			100	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= 320V; I_B= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0			1.0	mA
h_{FE}	DC Current Gain	I_C= 3A; V_{CE}= 2V	10			
f_T	Current-Gain—Bandwidth Product	I_C= 0.3A; V_{CE}= 10V; f= 1MHz	10			MHz
Switching times						
t_{on}	Turn-on Time	I_C= 3A, I_{B1}= -I_{B2}= 0.6A			1.0	μs
t_{stg}	Storage Time				2.0	μs
t_f	Fall Time				0.5	μs