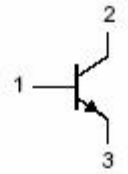
isc Silicon NPN Power Transistor — 2SC2816

DESCRIPTION

- High Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 400V(Min)
- High Switching Speed
- High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



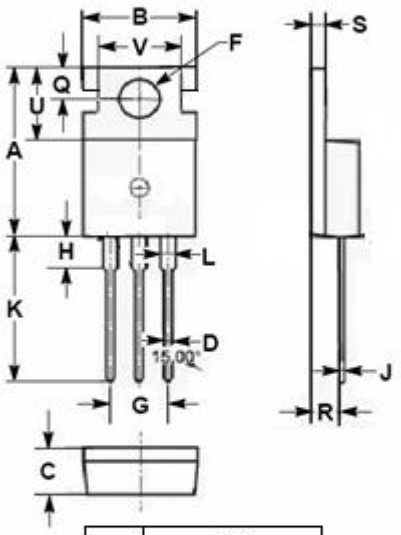
PIN 1. BASE
2.COLLECTOR
3. EMITTER
TO-220C package

APPLICATIONS

- Designed for high voltage, high speed and high power applications.

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	5	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	2.5	A
P_C	Collector Power Dissipation @ T_C=25℃	40	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



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

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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
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 10mA ; I_C= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.5A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.5A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 400V; I_E=0			50	μA
I_{CEO}	Collector Cutoff Current	V_{CE}= 350V; R_{BE}= ∞			50	μA
h_{FE-1}	DC Current Gain	I_C= 2.5A; V_{CE}= 5V	15			
h_{FE-2}	DC Current Gain	I_C= 5A; V_{CE}= 5V	7			
Switching times						
t_{on}	Turn-on Time	I_C= 5A, I_{B1}= -I_{B2}= 1A; V_{CC}≈150V			0.5	μs
t_{stg}	Storage Time				1.5	μs
t_f	Fall Time				0.5	μs