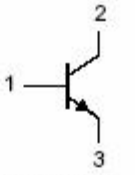
isc Silicon NPN Power Transistor — BUL52A

DESCRIPTION

- Collector–Emitter Sustaining Voltage
  : $V_{CEO(SUS)}$ = 500V(Min.)
- Collector Saturation Voltage
  : $V_{CE(sat)}$ = 0.1V(Max) @ I_C= 0.1A
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

1 2 3



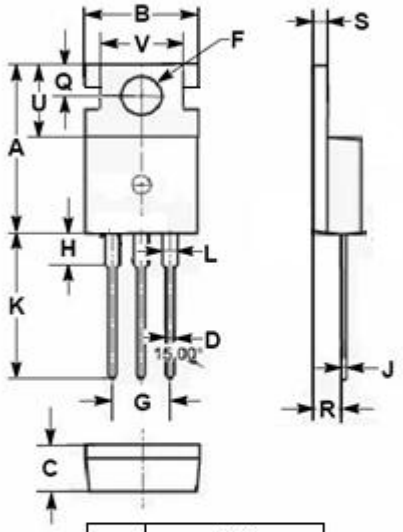
PIN 1. BASE
2. COLLECTOR
3. EMITTER
TO-220C package

APPLICATIONS

- Designed for use in lighting applications and low cost switch-mode power supplies.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1000	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-peak	10	A
I_B	Base Current-Continuous	2.5	A
P_C	Collector Power Dissipation T_C=25℃	100	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

isc Silicon NPN Power Transistor BUL52A

ELECTRICAL CHARACTERISTICS

T_C =25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 10mA; I_B= 0	500			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	1000			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 1mA; I_C= 0	10			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 0.1A; I_B= 20mA			0.1	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 0.5A			0.2	V
$V_{CE(sat)-3}$	Collector-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.5A			0.8	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 1A; I_B= 0.2A			1.0	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 2.5A; I_B= 0.5A			1.2	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 500V; I_B= 0			100	μA
I_{CBO}	Collector Cutoff Current	V_{CB}= 1000V; I_E= 0 V_{CB}= 1000V; I_E= 0, T_C= 125℃			10 100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 9V; I_C= 0 V_{EB}= 9V; I_C= 0, T_C= 125℃			10 100	μA
h_{FE-1}	DC Current Gain	I_C= 0.1A; V_{CE}= 5V	18			
h_{FE-2}	DC Current Gain	I_C= 1A; V_{CE}= 5V	12			
h_{FE-3}	DC Current Gain	I_C= 2.5A; V_{CE}= 1V	5			