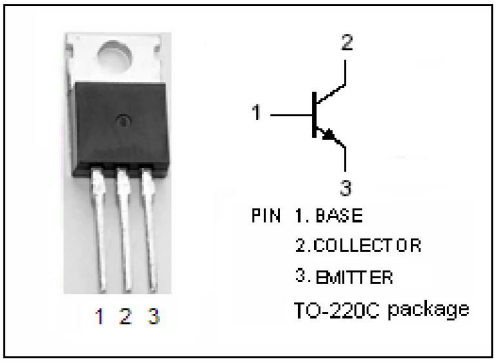
isc Silicon NPN Power Transistor BUJ302A

DESCRIPTION

- High Voltage
- High Speed Switching

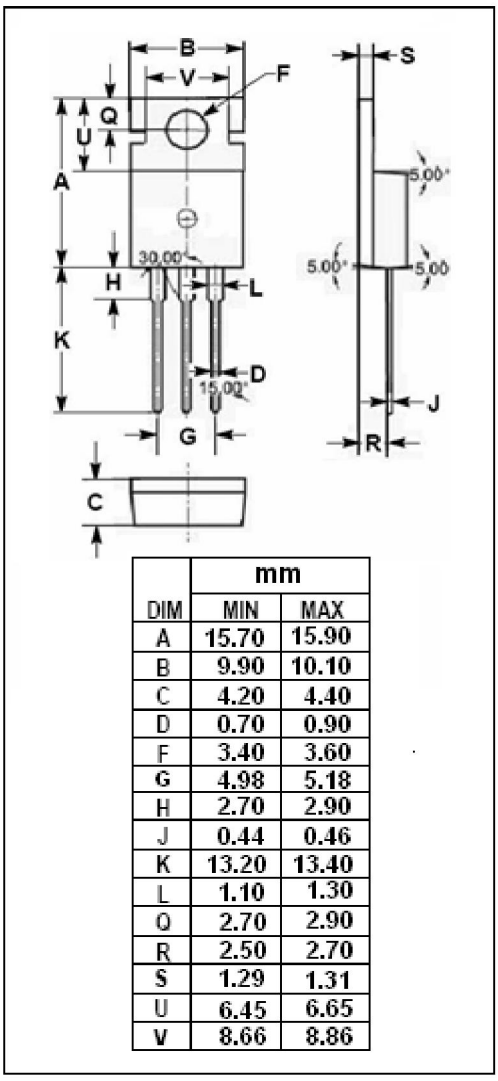


APPLICATIONS

- Desined for use in high frequency electronic lighting ballast applications, converters, inverters, switching regulators, motor control systems, etc.

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	7	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Collector Current-Peak	3	A
I_B	Base Current	0.75	A
I_{BM}	Base Current-Peak	1	A
P_C	Collector Power Dissipation @T_C=25℃	50	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



DIM	mm MIN	mm MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
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= 100mA; I_B= 0, L= 25mH	500			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 1A; I_B= 0.2A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 1A; I_B= 0.2A			1.1	V
I_{CES}	Collector Cutoff Current	V_{CE}=RatedV_{CES} ;V_{BE}= 0 V_{CE}=RatedV_{CES} ;V_{BE}= 0;T_C=125℃			0.2 1.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			1	mA
h_{FE-1}	DC Current Gain	I_C= 10mA ; V_{CE}= 5V	15		35	
h_{FE-2}	DC Current Gain	I_C= 0.1A ; V_{CE}= 5V	14		35	
Switching Times ;Resistive Load						
t_{on}	Turn-on Time	I_C= 1.0A; I_{B1}= -I_{B2}= 0.2A; R_L= 75Ω ; V_{BB2}= 4V			1.0	μs
t_s	Storage Time				4.0	μs
t_f	Fall Time				0.8	μs
Switching Times ;Resistive Load						
t_s	Storage Time	I_C= 1.0A; I_{B1}= -I_{B2}= 0.2A; L_B=1uH; -V_{BB}= 5V			1.4	μs
t_f	Fall Time		145		160	ns
Switching Times ;Resistive Load						
t_s	Storage Time	I_C= 1.0A; I_{B1}= -I_{B2}= 0.2A; L_B=1uH; -V_{BB}= 5V ； T_j=100℃			1.5	μs
t_f	Fall Time				200	ns