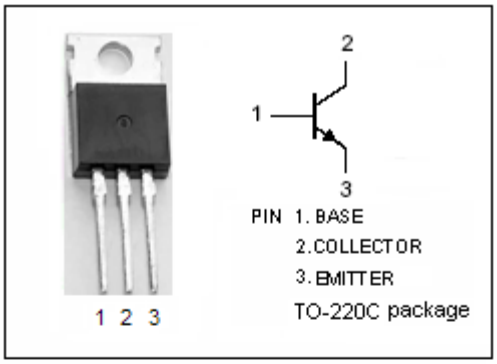
isc Silicon NPN Power Transistor BU1706A

DESCRIPTION

- High Voltage
- High Speed Switching



APPLICATIONS

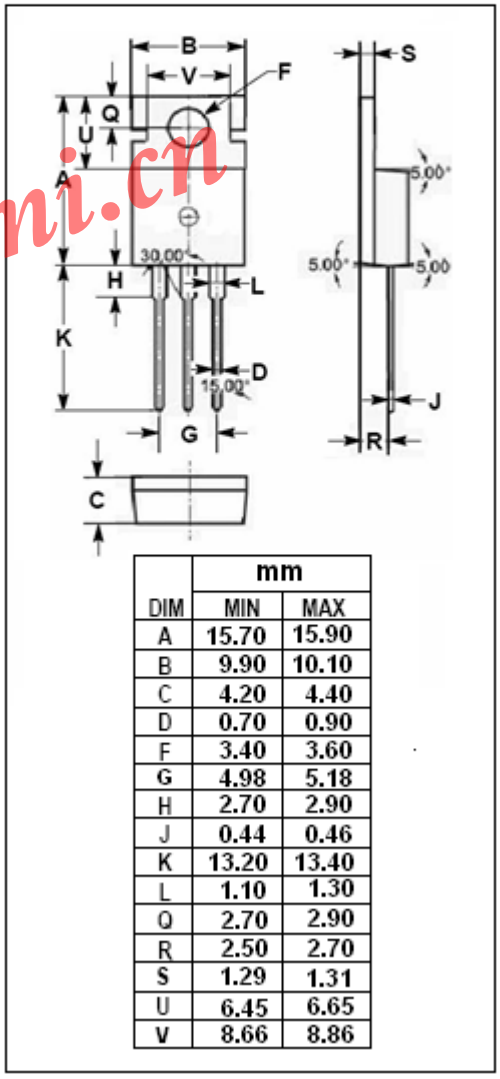
- Designed for use in high frequency electronic lighting ballast applications.

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CESM}	Collector-Emitter Voltage V_{BE}= 0	1750	V
V_{CEO}	Collector-Emitter Voltage	750	V
V_{EBO}	Emitter-Base Voltage	12	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	8	A
I_B	Base Current-Continuous	3	A
I_{BM}	Base Current-peak	5	A
P_C	Collector Power Dissipation @T_C=25℃	100	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.25	℃/W



DIM	mm MIN	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= 0.1A; I_B= 0; L= 25mH	750			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 1.5A; I_B= 0.3A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 1.5A; I_B= 0.3A			1.3	V
I_{CES}	Collector Cutoff Current	V_{CE}= V_{CESM}; V_{BE}= 0 V_{CE}= V_{CESM}; V_{BE}= 0; T_C=125℃			1.0 2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 12V; I_C= 0			1.0	mA
h_{FE-1}	DC Current Gain	I_C= 5mA; V_{CE}= 10V	8			
h_{FE-2}	DC Current Gain	I_C= 400mA; V_{CE}= 3V	12		35	
h_{FE-3}	DC Current Gain	I_C= 1.5A; V_{CE}= 1V	5			
Switching Times Resistive Load						
t_{on}	Turn-On Time	I_C= 1.5A; I_{B1}= -I_{B2}= 0.3A			1.5	μs
t_s	Storage Time				6.5	μs
t_f	Fall Time				1.0	μs