

# isc Silicon NPN Power Transistor

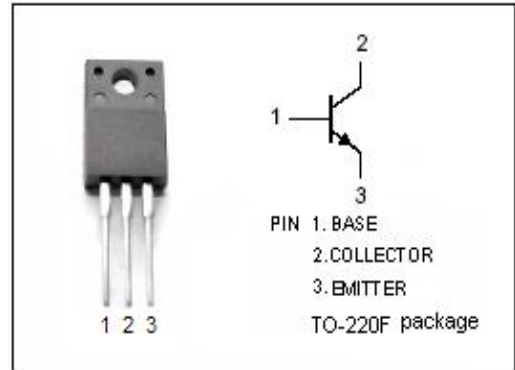
# BU1706AX

## DESCRIPTION

- High Voltage
- High Speed Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

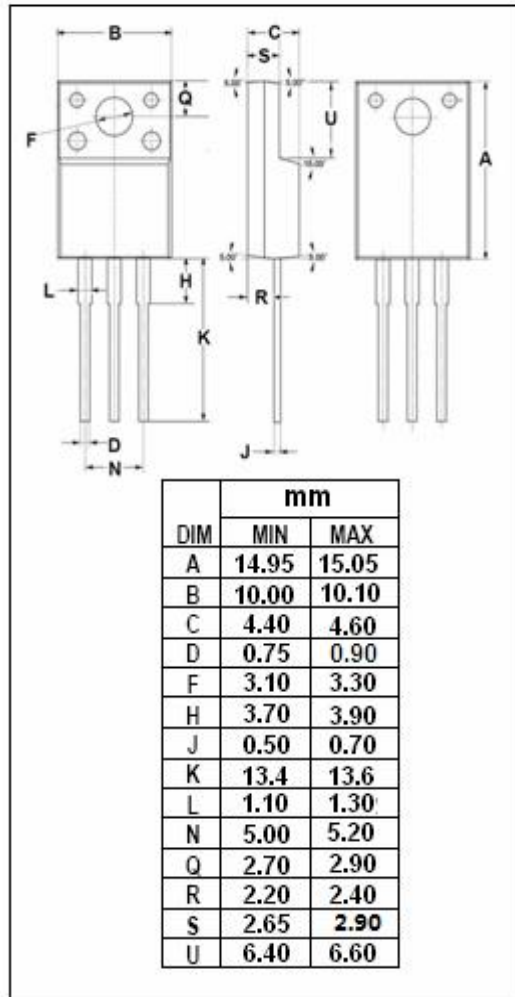
## APPLICATIONS

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



## ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CESM</sub>	Collector-Emitter Voltage V <sub>BE</sub> = 0	1500	V
V <sub>CEO</sub>	Collector-Emitter Voltage	800	V
V <sub>EBO</sub>	Emitter-Base Voltage	12	V
I <sub>C</sub>	Collector Current-Continuous	5	A
I <sub>CM</sub>	Collector Current-Peak	8	A
I <sub>B</sub>	Base Current-Continuous	3	A
I <sub>BM</sub>	Base Current-peak	5	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	32	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-40~150	°C



## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	4.0	°C/W

**isc Silicon NPN Power Transistor****BU1706AX****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}; I_B= 0;$	750			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 1.5\text{A}; I_B= 0.3\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 1.5\text{A}; I_B= 0.3\text{A}$			1.3	V
$I_{CES}$	Collector Cutoff Current	$V_{CE}= V_{CESM}; V_{BE}= 0$ $V_{CE}= V_{CESM}; V_{BE}= 0; T_C=125^\circ\text{C}$			1.0 2.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}= 12\text{V}; I_C= 0$			1.0	mA
$h_{FE-1}$	DC Current Gain	$I_C= 5\text{mA}; V_{CE}= 10\text{V}$	8			
$h_{FE-2}$	DC Current Gain	$I_C= 400\text{mA}; V_{CE}= 3\text{V}$	12		35	
$h_{FE-3}$	DC Current Gain	$I_C= 1.5\text{A}; V_{CE}= 1\text{V}$	5			

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