

isc Silicon NPN Power Transistor

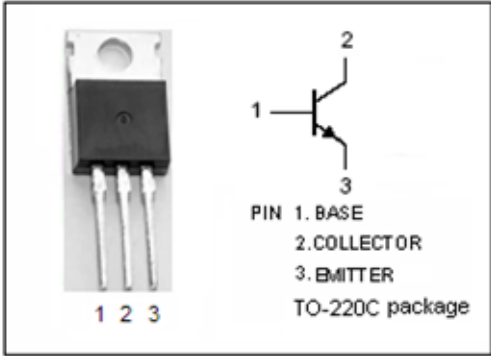
BUT93

DESCRIPTION

- High Voltage
- High Speed Switching
- High Power Dissipation

APPLICATIONS

- Designed for switching mode power supply and electronic ballast applications.

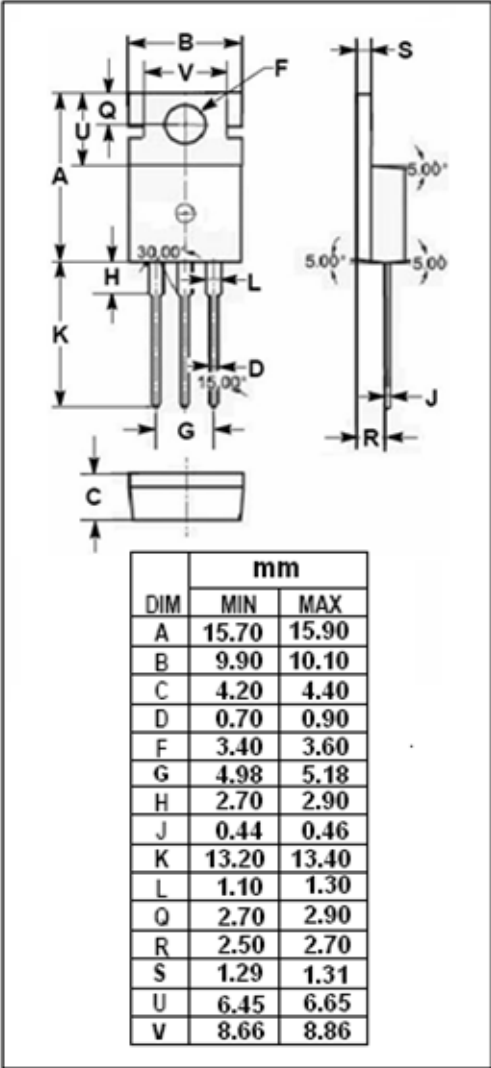


ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CES}	Collector-Emitter Voltage	600	V
V _{CEO}	Collector-Emitter Voltage	350	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current-Continuous	4	A
I _{CM}	Collector Current-Peak	6	A
I _B	Base Current- Continuous	2	A
P _C	Collector Power Dissipation @T _C =25°C	50	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance,Junction to Case	2.5	°C/W



ISC Silicon NPN Power Transistor**BUT93****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 0.1A; I _B = 0, L= 125mH	350			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	5			V
V _{CE(sat)} -1	Collector-Emitter Saturation Voltage	I _C = 0.3A; I _B = 30mA			0.5	V
V _{CE(sat)} -2	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 750mA			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} = 600V; V _{BE} = 0 V _{CE} = 600V; V _{BE} = 0; T _C =125°C			0.2 1.5	mA
h _{FE}	DC Current Gain	I _C = 1A; V _{CE} = 2V	10			
f _T	Current-Gain—Bandwidth Product	I _C = 0.5A; V _{CE} = 10V		9		MHz

Switching Times ;Resistive Load

t _s	Storage Time	I _C = 1A; I _{B1} = 0.2A; I _{B2} = -0.4A			2.0	μ s
t _f	Fall Time				0.25	μ s