

Silicon NPN Power Transistor

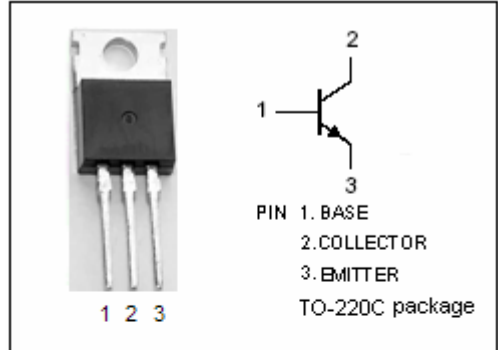
BUF410A

DESCRIPTION

- High Voltage
- High Speed Switching

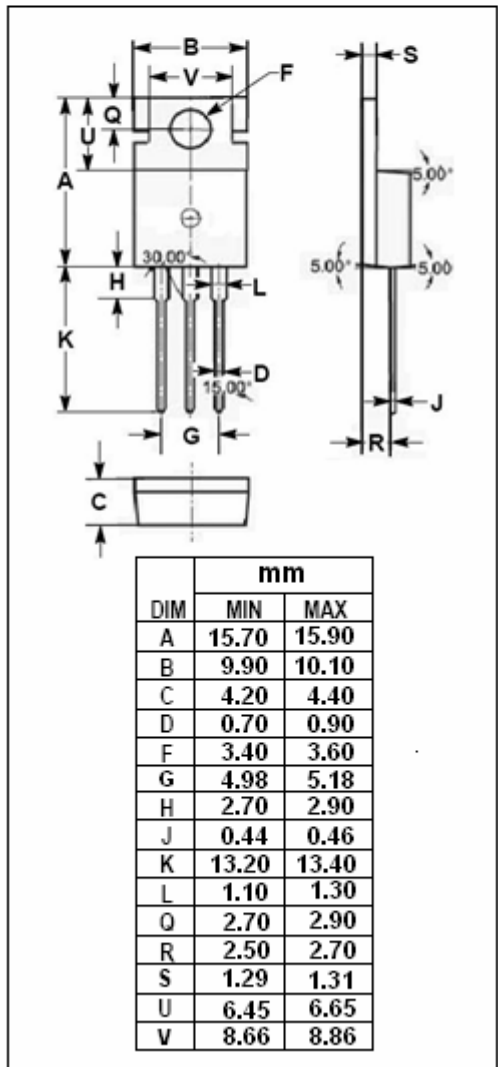
APPLICATIONS

- Designed for use in high-frequency power supplies and motor control applications.



ABSOLUTE MAXIMUM RATINGS (T_a=25)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CEV}	Collector-Emitter Voltage V _{BE} = -1.5V	1000	V
V _{CEO}	Collector-Emitter Voltage	450	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current-Continuous	15	A
I _{CM}	Collector Current-Peak	30	A
I _B	Base Current-Continuous	3	A
I _{BM}	Base Current-peak	4.5	A
P _C	Collector Power Dissipation @T _C =25	125	W
T _j	Junction Temperature	150	
T _{stg}	Storage Temperature Range	-65~150	



THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.0	/W

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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 = 0.2A; I _B = 0; L= 25mH	450			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 50mA; I _C = 0	7			V
V _{CE(sat)-1}	Collector-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A		0.8		V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 10A; I _B = 2A		0.5		V
V _{BE(sat)-1}	Base-Emitter Saturation Voltage	I _C = 5A; I _B = 0.5A		0.9		V
V _{BE(sat)-2}	Base-Emitter Saturation Voltage	I _C = 10A; I _B = 2A		1.1		V
I _{CER}	Collector Cutoff Current	V _{CE} =V _{CEV} ; R _{BE} = 100 V _{CE} =V _{CEV} ; R _{BE} = 100 ;T _C =100			0.2 1.0	mA
I _{CEV}	Collector Cutoff Current	V _{CE} = V _{CEV} ; V _{BE} = -1.5V V _{CE} = V _{CEV} ; V _{BE} = -1.5V;T _C =100			0.2 1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	mA

Switching Times

t _s	Storage Time	I _C = 5A;I _{B1} = 0.5A;V _{CC} = 50V; V _{BB} = -5V, R _{BB} = 1.2 ;L= 0.5mH V _{clamp} = 400V		0.8		μs
t _f	Fall Time			0.05		μs