

isc Silicon NPN Power Transistor

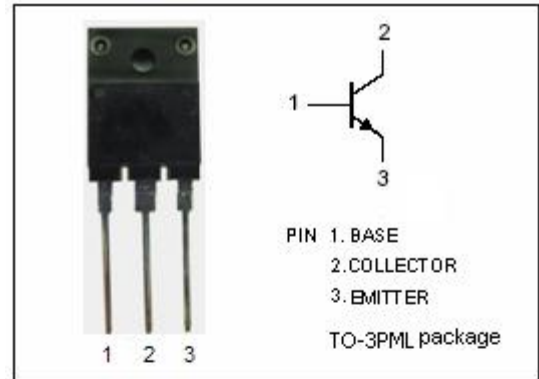
BUF410I

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 450V$ (Min.)
- High Speed Switching
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

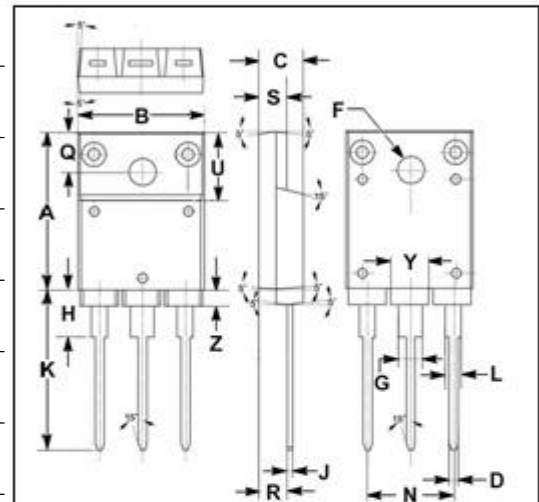
APPLICATIONS

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



ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ C$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage $V_{BE} = -1.5V$	850	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 @ $T_C=25^\circ C$	85	W
T_j	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature Range	-65~150	$^\circ C$



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.75	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.20
H	5.90	6.10
J	0.595	0.70
K	21.10	22.50
L	1.90	2.25
N	10.80	11.00
O	4.90	5.10
R	3.75	3.95
S	3.20	3.60
U	9.90	10.10
Y	4.20	4.90
Z	1.90	2.10

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.2	$^\circ C/W$

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BUF4101
ELECTRICAL CHARACTERISTICS

 T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	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 Ω V _{CE} =V _{CEV} ; R _{BE} = 100 Ω; T _C =100°C			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°C			0.2 1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	mA

Switching Times; Resistive Load

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

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