

isc Silicon NPN Power Transistor
BUX10P
DESCRIPTION

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

APPLICATIONS

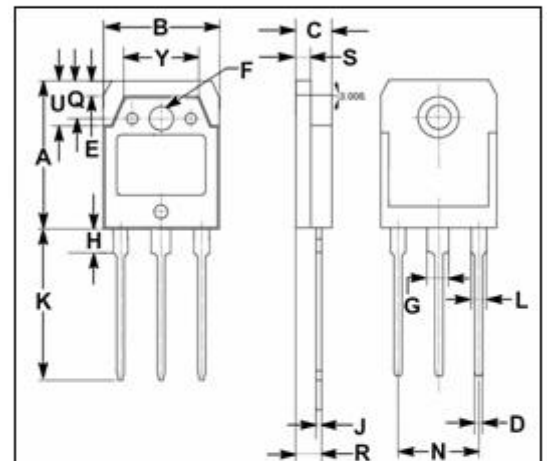
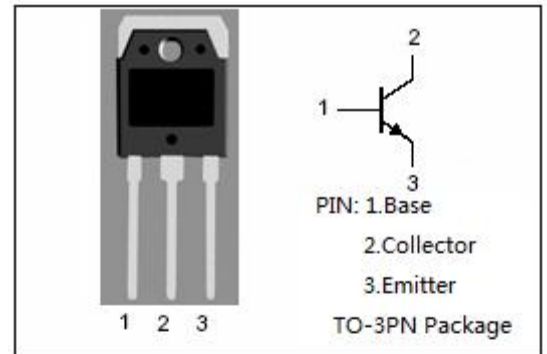
- Motor control
- Linear and switching industrial equipment

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	160	V
V _{CEX}	Collector-Emitter Voltage V _{BE} = -1.5V	160	V
V _{CEO}	Collector-Emitter Voltage	125	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current-Continuous	25	A
I _{CM}	Collector Current-Peak	30	A
I _B	Base Current-Continuous	5	A
P _C	Collector Power Dissipation @T _C =25°C	150	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	1.17	°C/W



DIM	mm	
	MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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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	125			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 = 10A; I _B = 1A			0.6	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 20A ;I _B = 2A			1.2	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 20A ;I _B = 2A			2.0	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 100V; I _B = 0			1.5	mA
I _{CBO}	Collector-Base Cutoff Current	V _{CB} =V _{CB0} ; I _E = 0 V _{CB} =V _{CB0} ; I _E = 0; T _C =125°C			1.5 6.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	mA
h _{FE-1}	DC Current Gain	I _C = 10A; V _{CE} = 2V	20		60	
h _{FE-2}	DC Current Gain	I _C = 20A; V _{CE} = 4V	10			
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 15V, f _{test} = 10MHz	8			MHz

Switching Times

t _{on}	Turn-on Time	I _C = 20A ;I _{B1} = 2A; V _{CC} = 30V			1.5	μs
t _s	Storage Time	I _C = 20A ;I _{B1} = -I _{B2} = 2A; V _{CC} = 30V			1.2	μs
t _f	Fall Time				0.3	μs

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