

isc Silicon NPN Power Transistor
BUX21
DESCRIPTION

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

APPLICATIONS

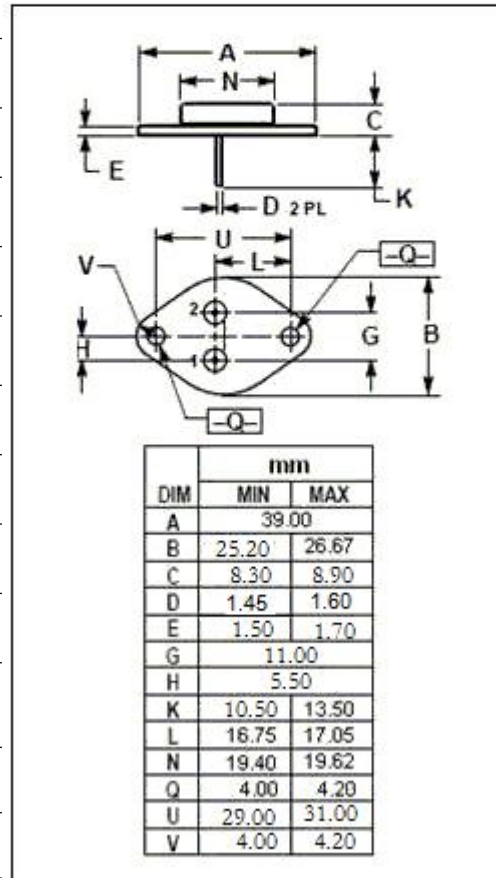
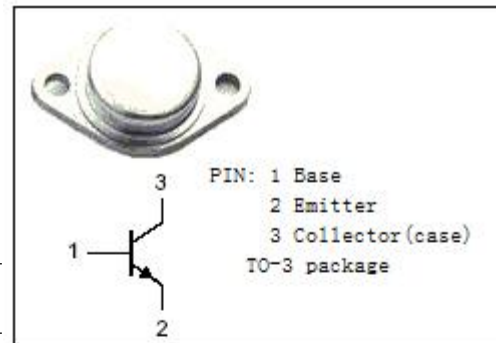
- Desinged for use in switching and linear applications in military and industrial equipment.

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	250	V
V _{CEX}	Collector-Emitter Voltage V _{BE} = -1.5V	250	V
V _{CEO}	Collector-Emitter Voltage	200	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	Collector Current-Continuous	40	A
I _{CM}	Collector Current-Peak	50	A
I _B	Base Current-Continuous	8	A
P _C	Collector Power Dissipation @T _C =25°C	250	W
T _J	Junction Temperature	200	°C
T _{stg}	Storage Temperature Range	-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	0.5	°C/W



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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	200			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 = 12A; I _B = 1.2A			0.6	V
V _{CE(sat)-2}	Collector-Emitter Saturation Voltage	I _C = 25A ;I _B = 3A			1.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 25A ;I _B = 3A			1.5	V
I _{CEO}	Collector Cutoff Current	V _{CE} = 160V; I _B = 0			3.0	mA
I _{CBO}	Collector Cutoff Current	V _{CB} = 250V; I _E = 0 V _{CB} = 250V; I _E = 0; T _C =125°C			3.0 12.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	mA
h _{FE-1}	DC Current Gain	I _C = 12A ; V _{CE} = 2V	20		60	
h _{FE-2}	DC Current Gain	I _C = 25A ; V _{CE} = 4V	10			
f _T	Current-Gain—Bandwidth Product	I _C = 2A; V _{CE} = 15V, f _{test} = 10MHz	8			MHz

Switching Times

t _{on}	Turn-on Time	I _C = 25A ;I _{B1} = 3A; V _{CC} = 100V			1.2	μs
t _s	Storage Time	I _C = 25A ;I _{B1} = -I _{B2} = 3A; V _{CC} = 100V			1.8	μs
t _f	Fall Time				0.4	μs

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