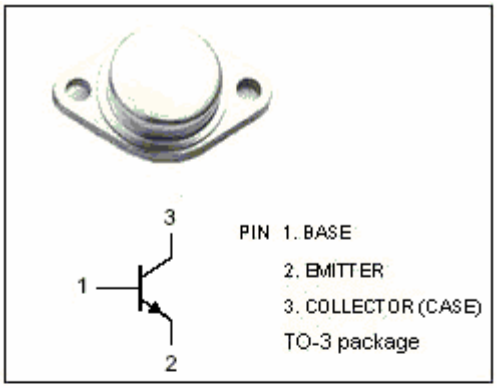
isc Silicon NPN Power Transistor BUX41

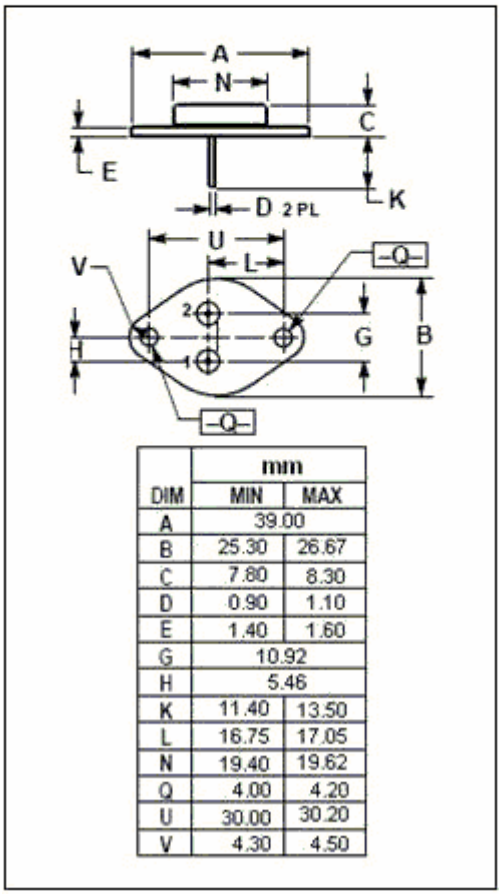
DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 200V(Min)
- High Current Capability
- Good Linearity of h_{FE}

APPLICATIONS

- Designed for high speed, high current, high power applications.





DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.30
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	250	V
$V_{CEO(SUS)}$	Collector-Emitter Voltage	200	V
V_{CEX}	Collector-Emitter Voltage V_{BE}= -2.5V	250	V
V_{CER}	Collector-Emitter Voltage R_{BE}= 100Ω	240	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @T_C=100℃	120	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.46	℃/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= 200mA ; I_B= 0, L= 25mH	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= 5A; I_B= 0.5A			1.2	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 8A; I_B= 1A			1.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 8A; I_B= 1A			2.0	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 160V; I_B= 0			1.0	mA
I_{CEX}	Collector Cutoff Current	V_{CE}= 250V; V_{BE}= -1.5V V_{CE}= 250V; V_{BE}= -1.5V; T_C= 125℃			1.0 5.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0			1.0	mA
h_{FE-1}	DC Current Gain	I_C= 5A ; V_{CE}= 4V	15		45	
h_{FE-2}	DC Current Gain	I_C= 8A ; V_{CE}= 4V	8			
f_T	Current-Gain—Bandwidth Product	I_C= 1A ; V_{CE}= 15V	8			MHz

Switching Times; Resistive Laod

t_{on}	Turn-on Time	I_C= 8A ;I_{B1}= -I_{B2}= 1A; V_{CC}= 150V; R_C= 18.75Ω			0.6	μs
t_s	Storage Time				1.5	μs
t_f	Fall Time				0.4	μs