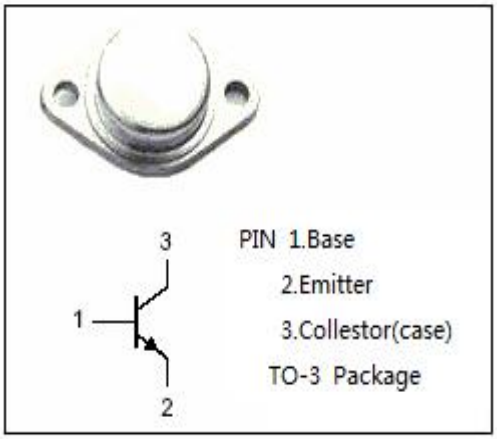
isc Silicon NPN Power Transistor — BUX15

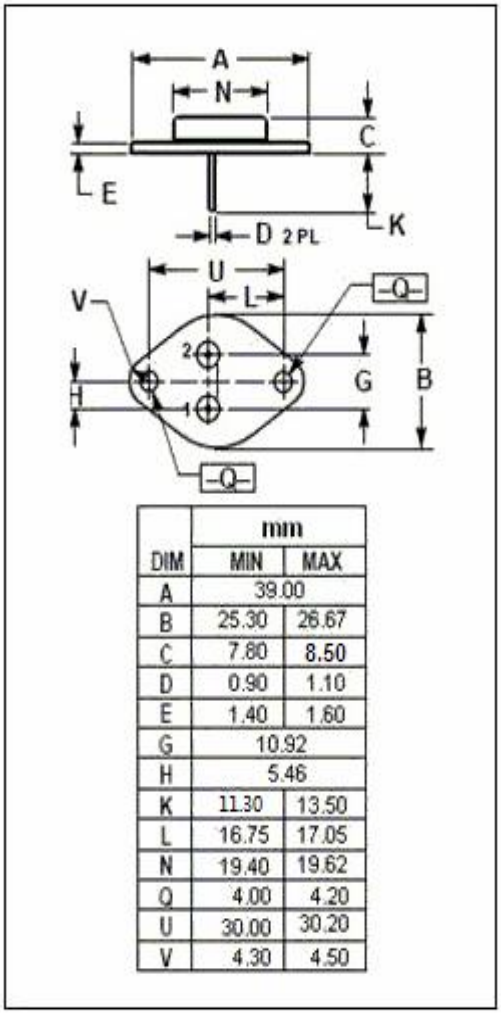


DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 500(Min.)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in off-line power supplies and is also well suited for use in a wide range of inverter or converter circuits and pulse-width-modulated regulators.



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	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(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	500	V
V_{CEO}	Collector-Emitter Voltage	500	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @T_C=25℃	150	W
T_j	Junction Temperature	200	℃
T_{stg}	Storage Temperature Range	-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.17	℃/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= 50mA; I_B= 0	500			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= 2A; I_B= 0.4A			0.6	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 4A ;I_B= 0.8A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 4A ;I_B= 0.8A			1.5	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 400V; I_B= 0			1.5	mA
I_{CBO}	Collector Cutoff Current	V_{CE}= 500V; I_E= 0 V_{CE}= 500V; I_E= 0;T_C=125℃			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= 2A; V_{CE}= 4V	15		60	
h_{FE-2}	DC Current Gain	I_C= 4A; V_{CE}= 4V	8			
f_T	Current-Gain—Bandwidth Product	I_C= 1A; V_{CE}= 15V	8			MHz
Switching Times						
t_{on}	Turn-on Time	I_C= 4A; I_{B1}= 0.8A; V_{CC}= 150V			1.6	μs
t_s	Storage Time	I_C= 4A; I_{B1}= -I_{B2}= 0.8A; V_{CC}= 150V			5.0	μs
t_f	Fall Time				1.4	μs