Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

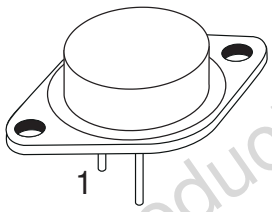
BUX10

HIGH POWER NPN SILICON TRANSISTOR

- STMicroelectronics PREFERRED SALESTYPE
- NPN TRANSISTOR
- HIGH CURRENT CAPABILITY
- FAST SWITCHING SPEED

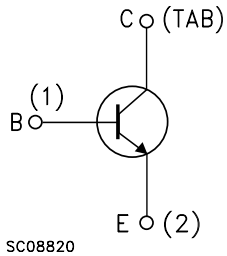
APPLICATIONS
- MOTOR CONTROL
- LINEAR AND SWITCHING INDUSTRIAL EQUIPMENT

DESCRIPTION
The BUX10 is a silicon Multi-Epitaxial Planar NPN transistor in Jedec TO-3 metal case, intended for use in switching and linear applications in military and industrial equipment.



TO-3

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage (I_E = 0)	160	V
V_{CEX}	Collector-emitter Voltage (V_{BE} = - 1.5V)	160	V
V_{CEO}	Collector-emitter Voltage (I_B = 0)	125	V
V_{EBO}	Emitter-base Voltage (I_C = 0)	7	V
I_C	Collector Current	25	A
I_{CM}	Collector Peak Current (t_P < 10 ms)	30	A
I_B	Base Current	5	A
P_{tot}	Total Power Dissipation at T_{case} ≤ 25 °C	150	W
T_{stg}	Storage Temperature	-65 to 200	°C
T_j	Max Operating Junction Temperature	200	°C

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	1.17	°C/W

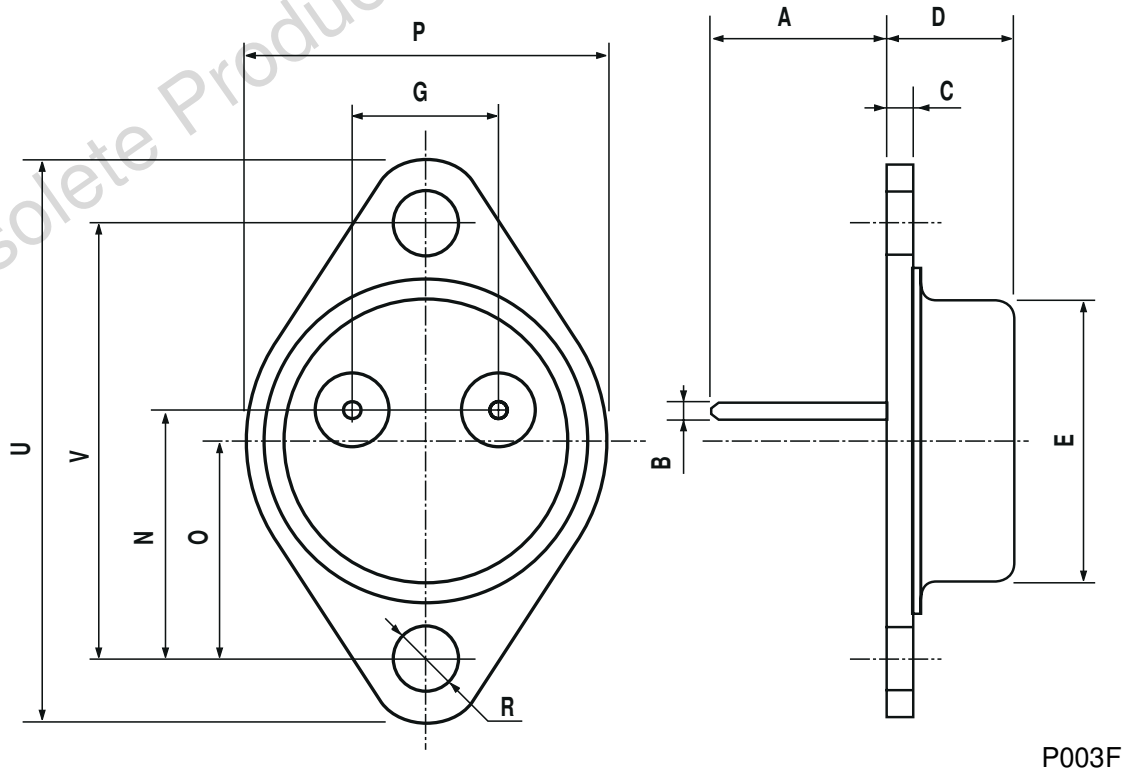
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEO}	Collector Cut-off Current (I_B = 0)	V_{CE} = 100 V			1.5	mA
I_{CEX}	Collector Cut-off Current	V_{CE} = 160 V V_{BE} = -1.5V T_{case} = 125 °C V_{CE} = 160 V V_{BE} = -1.5V			1.5 6	mA mA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 5 V			1	mA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = 200 mA	125			V
V_{EBO}	Emitter-Base Voltage (I_C = 0)	I_E = 50 mA	7			V
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = 10 A I_B = 1 A I_C = 20 A I_B = 2 A		0.3 0.7	0.6 1.2	V V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C = 20 A I_B = 2 A		1.6	2	V
h_{FE}	DC Current Gain	I_C = 10 A V_{CE} = 2 V I_C = 20 A V_{CE} = 4 V	20 10		60	
$I_{S/b}$	Second Breakdown Collector Current	V_{CE} = 30 V t = 1 s V_{CE} = 48 V t = 1 s	5 1			A A
f_T	Transistor Frequency	I_C = 1 A V_{CE} =15 V f = 10MHz	8			MHz
t_{on}	Turn-on Time	I_C = 20 A I_{B1} = 2 A V_{CC} = 30V		0.5	1.5	µs
t_s t_f	Storage Time Fall Time	I_C = 20 A I_{B1} = - I_{B2} = 2A V_{CC} = 30V		0.6 0.15	1.2 0.3	µs µs
	Clamped $E_{s/b}$ Collector Current	V_{clamp}=125 V L = 500 µH	20			A

* Pulsed: Pulse duration = 300µs, duty cycle ≤ 2 %

TO-3 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00		13.10	0.433		0.516
B	0.97		1.15	0.038		0.045
C	1.50		1.65	0.059		0.065
D	8.32		8.92	0.327		0.351
E	19.00		20.00	0.748		0.787
G	10.70		11.10	0.421		0.437
N	16.50		17.20	0.649		0.677
P	25.00		26.00	0.984		1.023
R	4.00		4.09	0.157		0.161
U	38.50		39.30	1.515		1.547
V	30.00		30.30	1.187		1.193



P003F