

isc Silicon NPN Power Transistors

BUX17/A/B/C

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 150V(\text{Min})$ - BUX17
= 250V(Min)- BUX17A
= 300V(Min)- BUX17B
= 350V(Min)- BUX17C
- High Switching Speed
- High Power Dissipation

APPLICATIONS

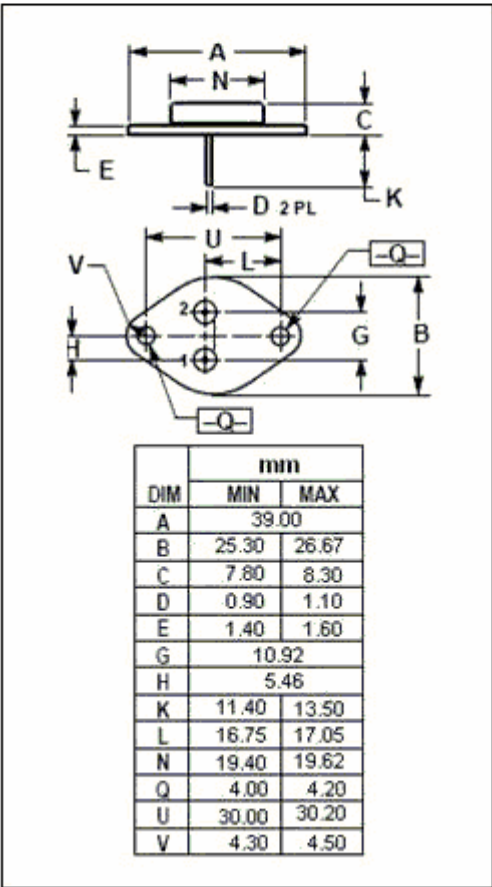
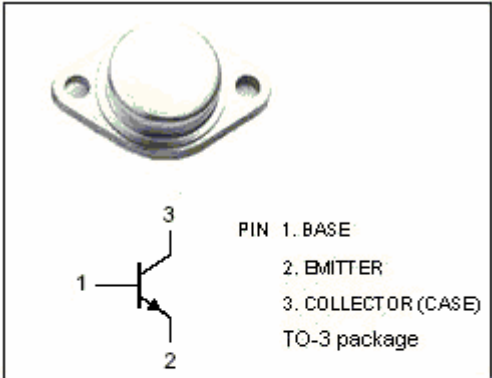
- Designed for use in off-line power supplies and is also well suited for use in a wide range of inverter or converter circuits and pulse-width-modulated regulators.

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}C$)

SYMBOL	PARAMETER		VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage $V_{BE} = -1.5V$	BUX17	250	V
		BUX17A	350	
		BUX17B	400	
		BUX17C	450	
$V_{CEO(SUS)}$	Collector-Emitter Voltage	BUX17	150	V
		BUX17A	250	
		BUX17B	300	
		BUX17C	350	
V_{EBO}	Emitter-Base Voltage		6	V
I_C	Collector Current-Continuous		10	A
I_B	Base Current-Continuous		2	A
P_C	Collector Power Dissipation@ $T_c=25^{\circ}C$		150	W
T_J	Junction Temperature		200	$^{\circ}C$
T_{stg}	Storage Temperature		-65~200	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.17	$^{\circ}C/W$



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ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	BUX17	$I_C=200\text{mA}; I_B=0$	150			V
		BUX17A		250			
		BUX17B		300			
		BUX17C		350			
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage		$I_E=1\text{mA}; I_C=0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	BUX17/A	$I_C=10\text{A}; I_B=2\text{A}$			2.0	V
		BUX17B/C	$I_C=8\text{A}; I_B=1.5\text{A}$			2.0	
$V_{BE(on)}$	Base-Emitter On Voltage	BUX17/A	$I_C=10\text{A}; V_{CE}=3\text{V}$			4	V
		BUX17B/C	$I_C=8\text{A}; V_{CE}=3\text{V}$			3.5	
I_{CEV}	Collector Cutoff Current	BUX17	$V_{CE}=250\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=250\text{V}; V_{BE}=-1.5\text{V}, T_C=150^{\circ}\text{C}$			3 10	mA
		BUX17A	$V_{CE}=350\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=350\text{V}; V_{BE}=-1.5\text{V}, T_C=150^{\circ}\text{C}$			3 10	
		BUX17B	$V_{CE}=400\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=400\text{V}; V_{BE}=-1.5\text{V}, T_C=150^{\circ}\text{C}$			3 5	
		BUX17C	$V_{CE}=450\text{V}; V_{BE}=-1.5\text{V}$ $V_{CE}=450\text{V}; V_{BE}=-1.5\text{V}, T_C=150^{\circ}\text{C}$			3 5	
I_{EBO}	Emitter Cutoff Current		$V_{EB}=6\text{V}; I_C=0$			1.0	mA
h_{FE}	DC Current Gain	BUX17/A	$I_C=10\text{A}; V_{CE}=3\text{V}$	7			
		BUX17B/C	$I_C=8\text{A}; V_{CE}=3\text{V}$				
f_T	Current-Gain—Bandwidth Product		$I_C=0.5\text{A}; V_{CE}=10\text{V}$	2.5			MHz