

isc Silicon NPN Power Transistors

BUX17/A/B/C

DESCRIPTION

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

APPLICATIONS

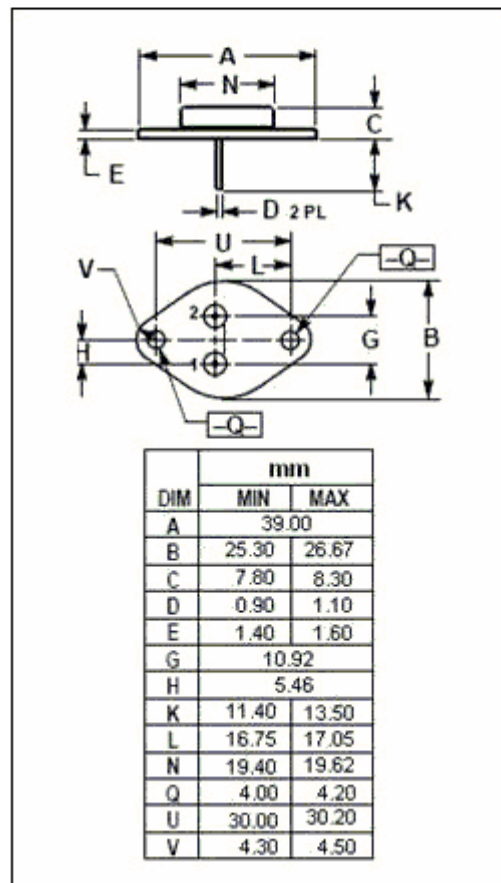
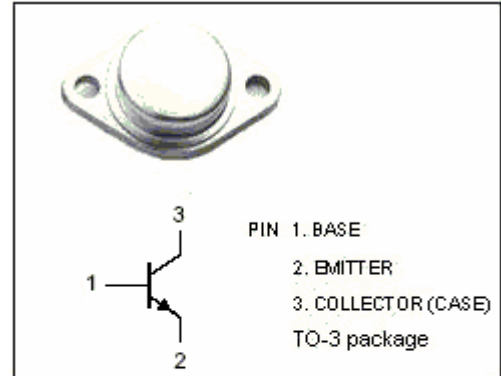
- Designed for use in off-line power supplies and is also well suited for use in a wide range of inverter or converter circuits and pulse-width-modulated regulators.

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

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@ $T_C=25^\circ\text{C}$	150	W	
T_J	Junction Temperature	200	$^\circ\text{C}$	
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$	

THERMAL CHARACTERISTICS

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



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ELECTRICAL CHARACTERISTICS

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

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