

**BUV18
BUV19**

**NPN HIGH CURRENT
SWITCHING TRANSISTORS**

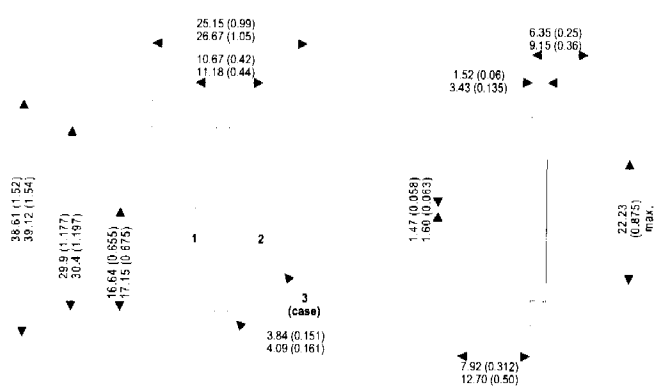
Designed for high energy applications
requiring robust fast switching devices

FEATURES

- Fast Switching
- Low VCE(SAT)
- High Switching Currents
- High Reliability
- Military Options Available

APPLICATIONS

- High Efficiency Converters
- Motor Drive Control
- Switching Regulator



TO-3 (TO-204AE)

Pin 1 – Gate Pin 2 – Drain Case – Source

ABSOLUTE MAXIMUM RATINGS

(T_{case} = 25°C unless otherwise stated)

		BUV18	BUV19
V _{CBO}	Collector-Emitter Voltage (I _E =0)	120V	160V
V _{CEO}	Collector-Emitter voltage (I _B =0)	60V	80V
V _{EBO}	Emitter- Base Voltage (I _C =0)	7V	7V
I _C	Collector Current	50A	50A
I _{C(PK)}	Peak Collector Current	90A	70A
I _B	Base Current	16A	12A
I _{B(PK)}	Peak Base Current	40A	30A
P _{TOT}	Total Dissipation @ T _{case} = 25°C	250W	
T _{stg}	Storage Temperature Range	-65 to 200°C	
T _j	Maximum Operating Junction Temperature	200°C	
R _{θJC}	Thermal Resistance Junction – Case	Max 0.7°C/W	



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Quality Semi-Conductors

BUV18 BUV19

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$V_{CEO(sus)}$ * Collector – Emitter Sustaining Voltage	$I_B = 0$ $I_C = 0.2A$ BUV18 $L = 25mH$	60			V
	$I_B = 0$ $I_C = 0.2A$ BUV19 $L = 25mH$	80			
$V_{CE(sat)}$ * Collector – Emitter Saturation Voltage	$I_C = 40A$ $I_B = 4A$ BUV18			0.6	V
	$I_C = 80A$ $I_B = 8A$			1.5	
	$I_C = 30A$ $I_B = 3A$ BUV19			0.6	
	$I_C = 60A$ $I_B = 6A$			1.2	
$V_{BE(sat)}$ * Base – Emitter Saturation Voltage	$I_C = 80A$ $I_B = 8A$ BUV18			2.2	V
	$I_C = 60A$ $I_B = 6A$ BUV19			2.0	
$V_{(BR)EBO}$ Emitter – Base Breakdown Voltage	$I_C = 0A$ $I_E = 50mA$	7			V
I_{CEX} Collector Cut-Off Current	$V_{BE} = -1.5V$ $V_{CE} = V_{CEX}$ $T_{case} = 100^{\circ}C$			1.0 3.0	mA
I_{EBO} Emitter Cut-Off Current	$I_C = 0A$ $V_{EB} = 5V$			1.0	
SWITCHING CHARACTERISTICS					
f_T Transition Frequency	$f = 10MHz$ $V_{CE} = 15V$ $I_C = 2A$	8			MHz
t_{on} Turn-On Time	$V_{CC} = 60V$ BUV18		1.2	1.5	
t_r Fall Time	$I_C = 80A$		0.18	0.25	μs
t_s Storage Time	$I_{B1} = -I_{B2} = 8A$		0.6	1.1	
t_{on} Turn-On Time	$V_{CC} = 80V$ BUV19		0.9	1.3	
t_r Fall Time	$I_C = 60A$		0.17	0.25	
t_s Storage Time	$I_{B1} = -I_{B2} = 6A$		0.6	1.1	

NOTES

* Pulse Test: $t_p = 300\mu s$, $\delta \leq 2\%$