

## BUV27 – BUV27A

### SILICON POWER TRANSISTORS

High-speed, NPN power transistors in a TO-220 envelope. They are intended for fast switching applications such as high frequency and efficiency converters, switching regulators and motor control.

Compliance to RoHS.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value		Unit
			BUV27	BUV27A	
$V_{CBO}$	Collector-Base Voltage	$I_E = 0$	240	300	V
$V_{CEO}$	Collector-Emitter Voltage	$I_B = 0$	120	150	V
$V_{EBO}$	Emitter-Base Voltage	$I_C = 0$	7	7	V
$I_C$	Collector Current		12		A
$I_{CM}$	Collector Peak Current	$t_p = 10ms$	20		A
$I_B$	Base Current		4		A
$I_{BM}$	Base Current	$t_p = 10ms$	6		A
$P_t$	Power Dissipation		85	85	W
$T_j$	Junction Temperature		175		°C
$T_{stg}$	Storage Temperature range		-65 to 175		

Limiting values in accordance with the Absolute Maximum System (IEC 134)

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-mb}$	From junction to mounting base	1.76	°C/W

## BUV27 – BUV27A

### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Value			Unit	
			Min	Typ	Max		
$I_{CEX}$	Collector Cutoff Current (*)	$V_{CE} = V_{CESMax}$ $V_{BE} = 1.5V, T_J = 125^\circ C$	BUV27	-	-	1	mA
			BUV27A				
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 5V, I_C = 0$	BUV27	-	-	1	mA
			BUV27A				
$V_{CEO_{sust}}$	Collector-Emitter Sustaining Voltage	$I_B = 0, I_C = 0.2A$ $L = 25mH$	BUV27	120	-	-	V
			BUV27A	150	-	-	
$V_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 50mA, I_C = 0$	BUV27	7	-	30	V
			BUV27A				
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$I_C = 4A, I_B = 400mA$	BUV27	-	-	0.7	V
			BUV27A	-	-	0.7	
			BUV27	-	-	1.5	
			BUV27A	-	-	1.5	
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage	$I_C = 8A, I_B = 0.8A$	BUV27	-	-	2	V
			BUV27A	-	-	2	

### SWITCHING TIMES

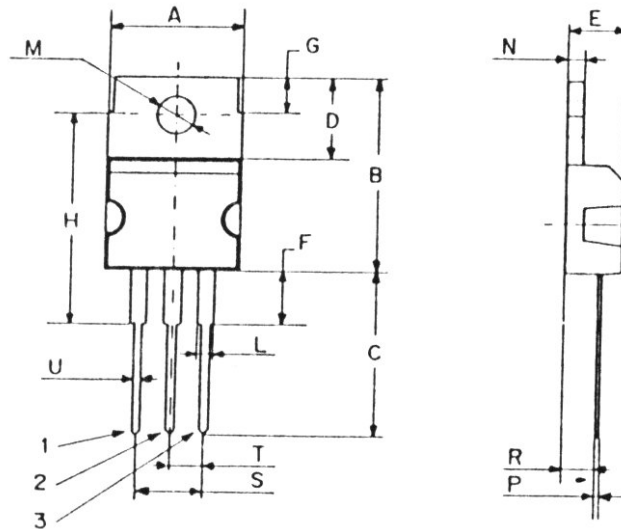
Symbol	Ratings	Test Condition(s)	Value			Unit	
			Min	Typ	Max		
$t_{on}$	turn-on time	<b>For BUV27</b> $I_C = 8A, V_{CC} = 50V$	BUV27	-	0.4	0.8	$\mu s$
			BUV27A				
$t_{off}$	turn-off time	$I_{B1} = 0.8A, I_{B2} = 1.6A$ <b>For BUV27A</b>	BUV27	-	0.5	1.2	
			BUV27A				
$t_f$	Fall time	$I_C = 7A, V_{CC} = 50V$ $I_{B1} = 0.7A, I_{B2} = 1.4A$	BUV27	-	0.12	0.25	
			BUV27A				

(\*) Measured with a half-sinewave voltage (curve tracer).

## BUV27 – BUV27A

### MECHANICAL DATA CASE TO-220

DIMENSIONS (mm)		
	Min.	Max.
A	9,90	10,30
B	15,65	15,90
C	13,20	13,40
D	6,45	6,65
E	4,30	4,50
F	2,70	3,15
G	2,60	3,00
H	15,75	17,15
L	1,15	1,40
M	3,50	3,70
N	-	1,37
P	0,46	0,55
R	2,50	2,70
S	4,98	5,08
T	2,49	2,54
U	0,70	0,90



Pin 1 :	Base
Pin 2 :	Collector
Pin 3 :	Emitter
Package	Collector

Revised August 2012

Information furnished is believed to be accurate and reliable. However, Comset Semiconductors assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. Data are subject to change without notice. Comset Semiconductors makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Comset Semiconductors assume any liability arising out of the application or use of any product and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Comset Semiconductors' products are not authorized for use as critical components in life support devices or systems.