COMSET SEMICONDUCTORS

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.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CESM}	Collector-Emitter Voltage Peak value ; V_{BE}=0	**BUV27**	240	V
		BUV27A	300	
V_{CEO}	Collector-Emitter Voltage	**BUV27**	120	V
		BUV27A	150	
V_{CEsat}	Collector-Emitter Saturation Voltage	**BUV27**	1.5	V
		BUV27A	1	
I_{Csat}	Collector Current Saturation	**BUV27**	8	A
		BUV27A	7	
I_C	Collector Current	**BUV27**	15	A
		BUV27A		
I_{CM}	Collector Peak Current	**BUV27**	25	A
		BUV27A		
I_B	Base Current	**BUV27**	4	A
		BUV27A		
I_{BM}	Base Current	**BUV27**	6	A
		BUV27A		

Symbol	Ratings			Value	Unit
P_t	Power Dissipation	@ T_{mb} < 25°	**BUV27**	65	Watts
			BUV27A		
T_j	Junction Temperature		**BUV27**	150	°C
			BUV27A		
T_s	Storage Temperature range		**BUV27**	-65 to +150	
			BUV27A		

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

THERMAL CHARACTERISTICS

Symbol	Ratings		Value	Unit
$R_{thJ\text{-}mb}$	From junction to mounting base	**BUV27**	1.92	K/W
		BUV27A		

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Mx	Unit
I_{CEX}	Collector Cutoff Current (*)	V_{CE} =V_{CES}MAX, V_{BE}= -1.5V T_J=125°C	**BUV27**	-	-	1	mA
			BUV27A				
I_{CER}	Collector Cutoff Current	V_{CE} =V_{CES}MAX, RBE= 50 Ω T_J=125°C	**BUV27**	-	-	3	mA
			BUV27A				
I_{EBO}	Emitter Cutoff Current	V_{EB}=5 V, I_C=0	**BUV27**	-	-	1	MA
			BUV27A				
$V_{CE0sust}$	Collector-Emitter Sustaining Voltage	I_B=0 , I_C= 0.2A , L = 25mH	**BUV27**	120	-	-	V
			BUV27A	150	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	I_C=8 A, I_B=800 mA	**BUV27**	-	-	1.5	V
		I_C=7 A, I_B=700 mA	**BUV27A**	-	-	1.5	
		I_C=4 A, I_B=400 mA	**BUV27**	-	-	0.7	
		I_C=3.5 A, I_B=350 mA	**BUV27A**	-	-	0.7	
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage	I_C=8 A, I_B=800 mA	**BUV27**	-	-	2.0	V
		I_C=7 A, I_B=700 mA	**BUV27A**	-	-	2.0	

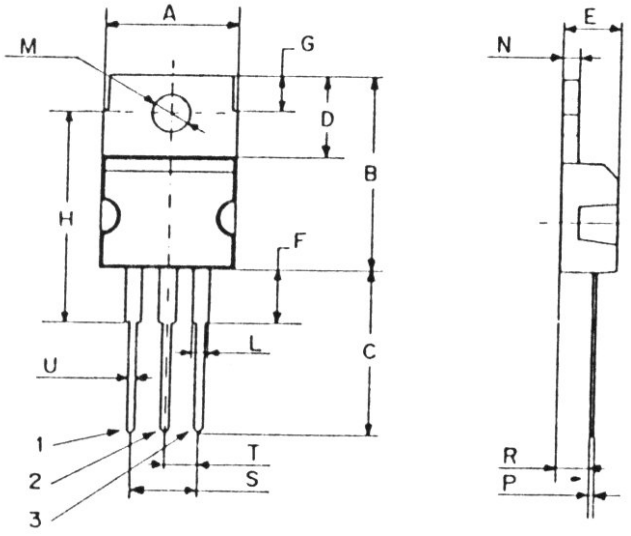
Symbol	Ratings			Value			Unit
t_{on}	turn-on time	I_{Con}=8 A, I_{Bon}= 800 mA ; I_{Boff}=2 I_{bon} ; V_{CE}= 50 V	**BUV27**	-	0.4	0.8	µs
			BUV27A				
t_{off}	turn-off time		**BUV27**	-	0.5	1.2	µs
			BUV27A				
t_f	Fall time		**BUV27**	-	0.12	0.4	µs
			BUV27A				

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

BUV27 – BUV27A

MECHANICAL DATA CASE TO-220

DIMENSIONS		
	mm	inches
A	9,86	0,39
B	15,73	0,62
C	13,37	0,52
D	6,67	0,26
E	4,44	0,17
F	4,21	0,16
G	2,99	0,11
H	17,21	0,68
L	1,29	0,05
M	3,6	0,14
N	1,36	0,05
P	0,46	0,02
R	2,1	0,08
S	5	0,19
T	2,51	0,098
U	0,79	0,03



Pin 1 :	Anode 1
Pin 2 :	Anode 2
Pin 3 :	Gate