

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		℃
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

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Value			Unit
			Min	Typ	Max	
I_{CEX}	Collector Cutoff Current (*)	$V_{CE} = V_{CESMax}$ $V_{BE} = 1.5V, T_J = 125^\circ C$	-	-	1	mA
		BUV27 BUV27A				
I_{EBO}	Emitter Cutoff Current	$V_{EB} = 5V, I_C = 0$	-	-	1	mA
		BUV27 BUV27A				
$V_{CEOsust}$	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
			BUV27A			
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$I_C = 4A, I_B = 400mA$	BUV27	-	-	V
			BUV27A	-	-	
		$I_C = 8A, I_B = 0.8A$	BUV27	-	-	
			BUV27A	-	-	
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage	$I_C = 8A, I_B = 0.8A$	BUV27	-	-	V
			BUV27A	-	-	

SWITCHING TIMES

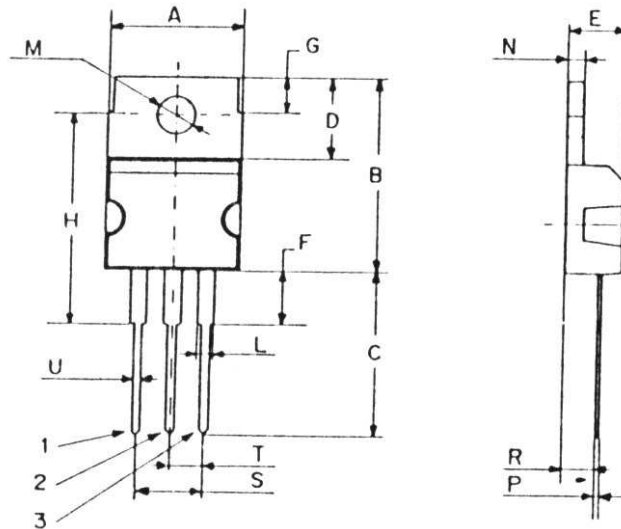
Symbol	Ratings	Test Condition(s)		Value			Unit
				Min	Typ	Max	
t _{on}	turn-on time	For BUV27 I _C = 8 A , V _{CC} = 50 V	BUV27	-	0.4	0.8	μs
			BUV27A				
t _{off}	turn-off time	I _{B1} = 0.8 A , I _{B2} = 1.6 A For BUV27A	BUV27	-	0.5	1.2	
			BUV27A				
t _f	Fall time	I _C = 7 A , V _{CC} = 50 V I _{B1} = 0.7 A , I _{B2} = 1.4 A	BUV27	-	0.12	0.25	
			BUV27A				

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

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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

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