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
$R_{thJ\text{-}mb}$	From junction to mounting base	1.76	℃/W

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ELECTRICAL CHARACTERISTICS

TC=25℃ 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℃	BUV27	-	-	1	mA
			BUV27A				
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5 V, I_C= 0	BUV27	-	-	1	mA
			BUV27A				
$V_{CEOsust}$	Collector-Emitter Sustaining Voltage	I_B= 0 , I_C= 0.2 A L = 25 mH	BUV27	120	-	-	V
			BUV27A	150	-	-	
V_{EBO}	Emitter-Base Breakdown Voltage	I_E= 50 mA , I_C= 0	BUV27	7	-	30	V
			BUV27A				
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	I_C= 4 A, I_B= 400 mA	BUV27	-	-	0.7	V
		I_C= 4 A, I_B= 400 mA	BUV27A	-	-	0.7	
		I_C=8 A, I_B= 0.8 A	BUV27	-	-	1.5	
		I_C=7 A, I_B= 0.7 A	BUV27A	-	-	1.5	
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage	I_C=8 A, I_B= 0.8 A	BUV27	-	-	2	V
		I_C=7 A, I_B= 0.7 A	BUV27A	-	-	2	

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 I_{B1} = 0.8 A , I_{B2} = 1.6 A **For BUV27A** I_C= 7 A , V_{CC}= 50 V I_{B1} = 0.7 A , I_{B2} = 1.4 A	BUV27	-	0.4	0.8	µs
			BUV27A				
t_{off}	turn-off time		BUV27	-	0.5	1.2	
			BUV27A				
t_f	Fall time		BUV27	-	0.12	0.25	
			BUV27A				

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

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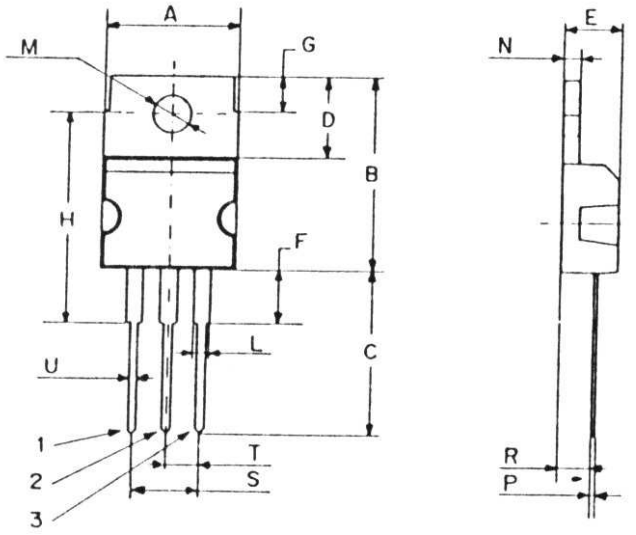
MECHANICAL DATA CASE TO-220

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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