

BUV28 – BUV28A

NPN SILICON POWER TRANSISTORS

High-speed, 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
			BUV28	BUV28A	
V_{CES}	Collector-Emitter Voltage	$V_{BE} = 0$	400	450	V
V_{CEO}	Collector-Emitter Voltage	$I_B = 0$	200	225	V
V_{EBO}	Emitter-Base Voltage	$I_C = 0$	5		V
I_C	Collector Current		10		A
I_{CM}	Collector Peak Current	$t_p = 10ms$	20		A
I_B	Base Current		2		A
I_{BM}	Base Peak Current		4		A
P_t	Power Dissipation		65		W
T_j	Junction Temperature		150		°C
T_{stg}	Storage Temperature range		-65 to 150		

THERMAL CHARACTERISTICS

Symbol	Ratings		Value	Unit
R_{thJ-mb}	From junction to mounting base	BUV28	1.785	°C/W
		BUV28A		

BUV28 – BUV28A

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Value			Unit	
			Min	Typ	Max		
I_{CEX}	Collector Cutoff Current	$V_{CE}=V_{CESMax}$ $V_{BE}= -1.5V, T_J= 125^\circ C$	BUV28	-	-	1	mA
			BUV28A	-	-	1	
I_{CER}	Collector Cutoff Current	$V_{CE}=V_{CESMax}$ $R_{BE}= 50 \Omega, T_J= 125^\circ C$	BUV28	-	-	3	mA
			BUV28A	-	-	3	
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5 V, I_C= 0$	BUV28	-	-	1	mA
			BUV28A	-	-	1	
$V_{CEO_{sust}}$	Collector-Emitter Sustaining Voltage	$I_C= 0.2 A, I_B= 0$ $L = 25 mH$	BUV28	200	-	-	V
			BUV28A	225	-	-	
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	$I_C= 3 A, I_B= 300 mA$ $I_C= 2 A, I_B= 200 mA$ $I_C= 6 A, I_B= 600 mA$ $I_C= 4 A, I_B= 400 mA$	BUV28	-	-	0.7	V
			BUV28A	-	-	0.7	
			BUV28	-	-	1.5	
			BUV28A	-	-	1.5	
$V_{BE(SAT)}$	Base-Emitter Saturation Voltage	$I_C= 6 A, I_B= 600 mA$ $I_C= 4 A, I_B= 400 mA$	BUV28	-	-	2	V
			BUV28A	-	-	2	

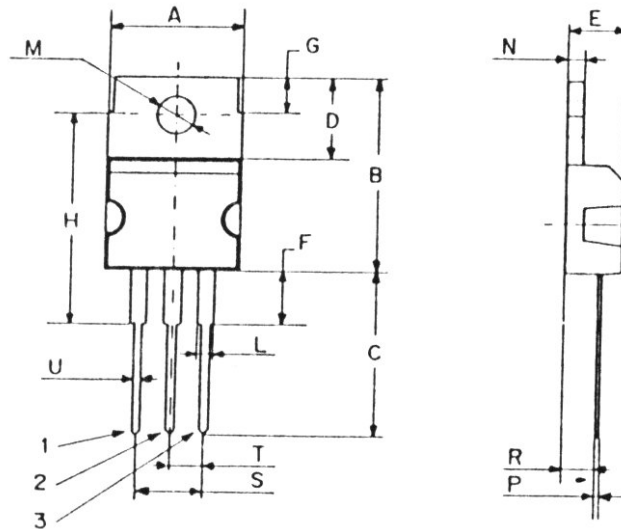
SWITCHING TIMES

Symbol	Ratings	Test Condition(s)	Value			Unit	
			Min	Typ	Max		
t_{on}	turn-on time	For BUV28 $I_C= 6 A, V_{CC}= 50 V$ $I_{B1}= 0.6 A$	BUV28	-	0.3	1	μs
			BUV28A	-	0.3	1	
T_{stg}	Storage time	$I_{B2}= -1.2 A$ For BUV28A $I_C= 4 A, V_{CC}= 50 V$	BUV28	-	0.5	1.5	
			BUV28A	-	0.5	1.5	
t_f	Fall time	$I_{B1}= 0.4 A$ $I_{B2}= -.8 A$	BUV28	-	0.1	0.25	
			BUV28A	-	0.1	0.25	

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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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