

BUV26

Switchmode Series NPN Silicon Power Transistor

Designed for high-speed applications such as:

- Switchmode Power Supplies
- High Frequency Converters
- Relay Drivers
- Driver

MAXIMUM RATINGS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO(sus)}$	90	Vdc
Collector-Base Voltage	V_{CBO}	180	Vdc
Emitter-Base Voltage	V_{EBO}	7.0	Vdc
Collector Current – Continuous	I_C	20	Adc
– Peak (pw 10 ms)	I_{CM}	30	Apk
Base Current – Continuous	I_B	4.0	Adc
	I_{BM}	6.0	Adc
Total Power Dissipation @ $T_C = 25^\circ\text{C}$	P_D	85	Watts
Total Power Dissipation @ $T_C = 60^\circ\text{C}$	P_D	65	Watts
Operating and Storage Junction Temperature Range	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

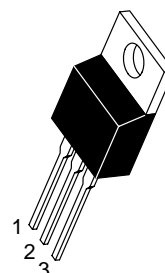
Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.76	$^\circ\text{C/W}$



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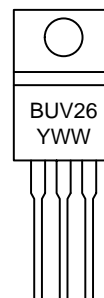
<http://onsemi.com>

**12 AMPERES
NPN SILICON
POWER TRANSISTORS
90 VOLTS
85 WATTS**



TO-220
CASE 221A
STYLE 1

MARKING DIAGRAM



Y = Year
WW = Work Week

ORDERING INFORMATION

Device	Package	Shipping
TBD	TO-220	50 Units/Rail

BUV26

ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector–Emitter Sustaining Voltage ($I_C = 200\text{ mA}$, $I_B = 0$, $L = 25\text{ mH}$)	$V_{CEO(sus)}$	90	–	Vdc
Collector Cutoff Current at Reverse Bias ($V_{CE} = 180\text{ V}$, $V_{BE} = -1.5\text{ V}$, $T_C = 125^\circ\text{C}$)	I_{CEX}	–	1.0	mAdc
Emitter Base Reverse Voltage ($I_E = 50\text{ mA}$)	V_{EBO}	7.0	30	V
Emitter Cutoff Current ($V_{EB} = 5.0\text{ V}$)	I_{EBO}	–	1.0	mAdc
Collector Cutoff Current ($V_{CE} = 180\text{ V}$, $R_{BE} = 50\ \Omega$, $T_C = 125^\circ\text{C}$)	I_{CER}	–	3.0	mAdc

ON CHARACTERISTICS

Collector–Emitter Saturation Voltage ($I_C = 6.0\text{ A}$, $I_B = 0.4\text{ A}$) ($I_C = 12\text{ A}$, $I_B = 1.2\text{ A}$)	$V_{CE(sat)}$	– –	0.6 1.5	Vdc
Base–Emitter Saturation Voltage ($I_C = 12\text{ A}$, $I_B = 1.2\text{ A}$)	$V_{BE(sat)}$	–	2.0	Vdc

SWITCHING CHARACTERISTICS (Resistive Load)

Turn On Time	$I_C = 12\text{ A}$, $I_B = 1.2\text{ A}$	t_{on}	–	0.6	μs
Storage Time	$V_{CC} = 50\text{ V}$, $V_{BE} = 6.0\text{ V}$	t_s	–	1.0	
Fall Time	$R_{B2} = 2.5\ \Omega$	t_f	–	0.15	

SWITCHING CHARACTERISTICS (Inductive Load)

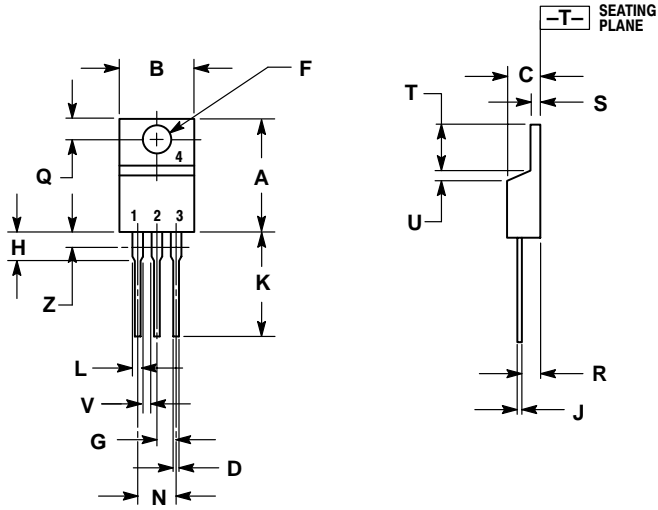
Storage Time	$V_{CC} = 50\text{ V}$, $I_C = 12\text{ A}$ $I_{B(end)} = 1.2\text{ A}$, $V_B = 5.0\text{ V}$	T_s	–	2.0	μs
Fall Time	$L_B = 0.5\text{ pH}$, $T_J = 125^\circ\text{C}$	T_f	–	.15	

1. Pulse Test: Pulse width $\leq 300\ \mu\text{s}$; Duty cycle $\leq 2\%$.

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PACKAGE DIMENSIONS

TO-220
CASE 221A-07
ISSUE AA




NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSION Z DEFINES A ZONE WHERE ALL BODY AND LEAD IRREGULARITIES ARE ALLOWED.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.570	0.620	14.48	15.75
B	0.380	0.405	9.66	10.28
C	0.160	0.190	4.07	4.82
D	0.025	0.035	0.64	0.88
F	0.142	0.147	3.61	3.73
G	0.095	0.105	2.42	2.66
H	0.110	0.155	2.80	3.93
J	0.014	0.022	0.36	0.55
K	0.500	0.562	12.70	14.27
L	0.045	0.060	1.15	1.52
N	0.190	0.210	4.83	5.33
Q	0.100	0.120	2.54	3.04
R	0.080	0.110	2.04	2.79
S	0.045	0.055	1.15	1.39
T	0.235	0.255	5.97	6.47
U	0.000	0.050	0.00	1.27
V	0.045	---	1.15	---
Z	---	0.080	---	2.04

STYLE 1:

- PIN 1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR

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