BUV26

Switchmode Series NPN Silicon Power Transistor

Designed for high−speed applications.

Features

- Switchmode Power Supplies
- High Frequency Converters
- Relay Drivers
- Driver
- Pb−Free Package is Available*

MAXIMUM RATINGS (T_J = 25°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 − Peak (pw 10 ms)	I_C I_{CM}	20 30	Adc Apk
Base Current − Continuous	I_B I_{BM}	4.0 6.0	Adc Adc
Total Power Dissipation @ T_C = 25°C Total Power Dissipation @ T_C = 60°C	P_D P_D	85 65	W W
Operating and Storage Junction Temperature Range	T_J, T_{stg}	− 65 to +150	°C

THERMAL CHARACTERISTICS

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

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

ON Semiconductor®

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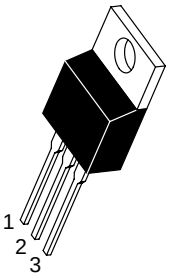
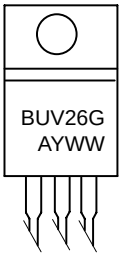
12 AMPERES NPN SILICON POWER TRANSISTORS 90 VOLTS, 85 WATTS

MARKING DIAGRAM



TO−220
CASE 221A
STYLE 1



BUV26 = Device Code
A = Assembly Location
Y = Year
WW = Work Week
G = Pb−Free Package

ORDERING INFORMATION

Device	Package	Shipping
BUV26	TO−220	50 Units/Rail
BUV26G	TO−220 (Pb−Free)	50 Units/Rail

ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

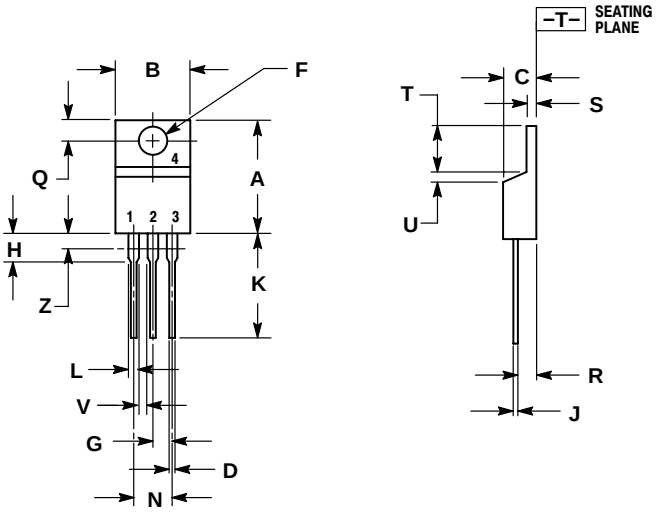
Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector−Emitter Sustaining Voltage (I_C = 200 mA, I_B = 0, L = 25 mH)	$V_{CEO(sus)}$	90	−	Vdc
Collector Cutoff Current at Reverse Bias (V_{CE} = 180 V, V_{BE} = −1.5 V, T_C = 125°C)	I_{CEX}	−	1.0	mAdc
Emitter Base Reverse Voltage (I_E = 50 mA)	V_{EBO}	7.0	30	V
Emitter Cutoff Current (V_{EB} = 5.0 V)	I_{EBO}	−	1.0	mAdc
Collector Cutoff Current (V_{CE} = 180 V, R_{BE} = 50 Ω, T_C = 125°C)	I_{CER}	−	3.0	mAdc
ON CHARACTERISTICS				
Collector−Emitter Saturation Voltage (I_C = 6.0 A, I_B = 0.4 A) (I_C = 12 A, I_B = 1.2 A)	$V_{CE(sat)}$	− −	0.6 1.5	Vdc
Base−Emitter Saturation Voltage (I_C = 12 A, I_B = 1.2 A)	$V_{BE(sat)}$	−	2.0	Vdc
SWITCHING CHARACTERISTICS (Resistive Load)				
Turn On Time	I_C = 12 A, I_B = 1.2 A	t_{on}	−	0.6	μs
Storage Time	V_{CC} = 50 V, V_{BE} = 6.0 V	t_s	−	1.0	
Fall Time	RB2 = 2.5 Ω	t_f	−	0.15	
SWITCHING CHARACTERISTICS (Inductive Load)				
Storage Time	V_{CC} = 50 V, I_C = 12 A $I_{B(end)}$ = 1.2 A, V_B = 5.0 V L_B = 0.5 pH, T_J = 125°C	T_s	−	2.0	μs
Fall Time		T_f	−	.15	

1. Pulse Test: Pulse width ≤ 300 μs; Duty cycle ≤ 2%.

BUV26

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.

	INCHES		MILLIMETERS	
DIM	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

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
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