

BUV26

Switchmode Series NPN Silicon Power Transistor

Designed for high-speed applications.

Features

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

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

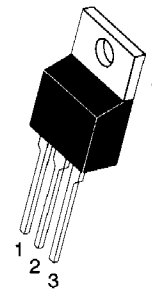
MAXIMUM RATINGS ($T_J = 25^\circ\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CE(sus)}$	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	W
Total Power Dissipation @ $T_C = 60^\circ\text{C}$	P_D	65	W
Operating and Storage Junction Temperature Range	T_J, T_{stg}	- 65 to +175	$^\circ\text{C}$

THERMAL CHARACTERISTICS

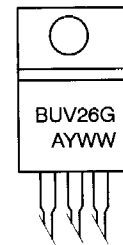
Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1.76	$^\circ\text{C/W}$

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

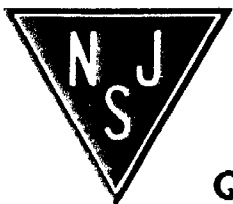


TO-220AB
CASE 221A
STYLE 1

MARKING DIAGRAM



BUV26 = Device Code
A = Assembly Location
Y = Year
WW = Work Week



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

BUV26

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

Characteristic	Symbol	Min	Max	Unit
----------------	--------	-----	-----	------

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

SWITCHING CHARACTERISTICS (Inductive Load)

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

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

BUV26

TYPICAL CHARACTERISTICS

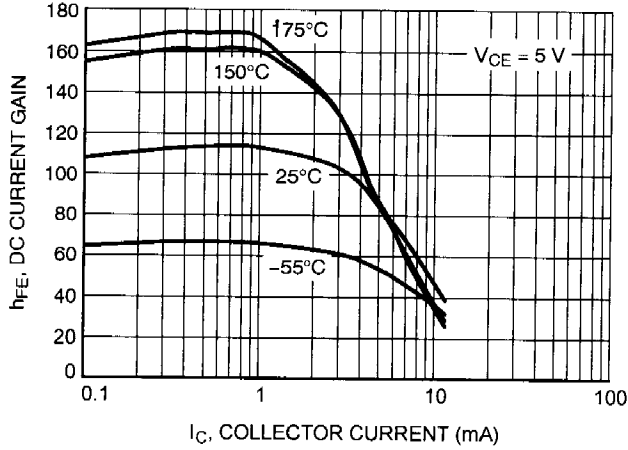


Figure 1. DC Current Gain

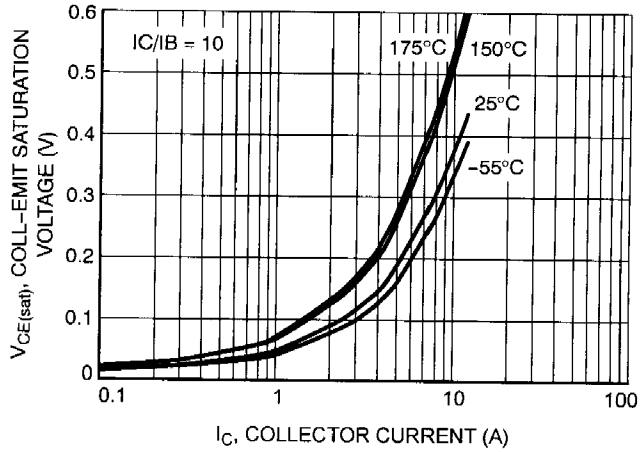


Figure 2. Collector-Emitter Saturation Voltage

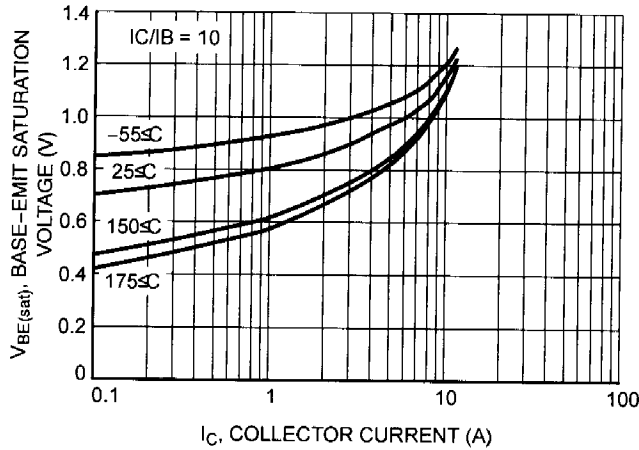


Figure 3. Base-Emitter Saturation Voltage

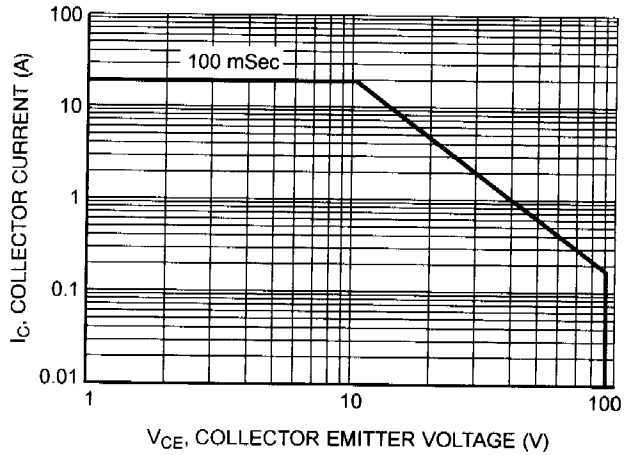
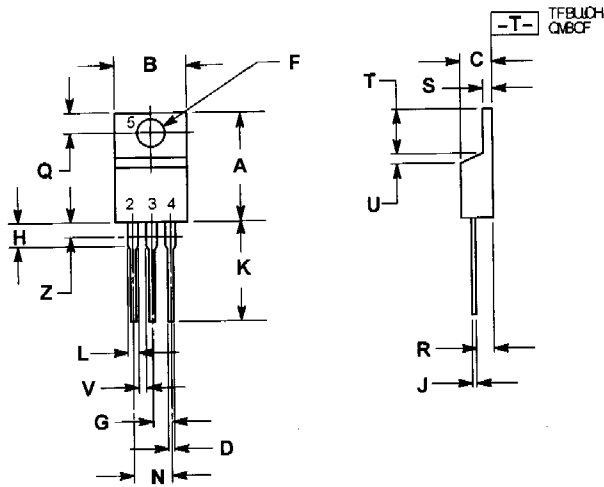


Figure 4. Safe Operating Area

TO-220



- CUPT:
 2/ E,NFOT,PO,CHIBOE,UPMFSBOD,CHGFSBOTJ
 Z256N-2 93/
 3/ DP,USPMMOCHIE,NFOT,PO,LODI /
 4/ E,NFOT,PO,IEFGDFTIBI,POFIXI,FSFIBIM
 CPEZIBCEIMFBE,USSFHMBS,LUFTIBSF
 BIMPXFE/

JDD FT		NMMNLFST	
E,N	N,O	NBY	N,O
B	1/681	1/731	25/59
C	1/491	1/516	1/77
D	1/271	1/21	5/18
E	1/138	1/147	1/75
G	1/253	1/272	4/72
H	1/11	6	1/216
I	1/221	1/272	3/91
K	1/125	1/136	1/47
L	1/611	1/573	23/81
M	1/158	1/171	2/26
O	1/21	1/321	5/94
R	1/211	1/231	3/65
S	1/191	1/221	3/15
T	1/158	1/166	2/26
U	1/346	1/366	6/8
V	1/111	1/161	1/11
W	1/156		2/26
T		1/191	3/15

- TUZF:2
 QOZ/ CBTF
 3/ DPMFDUPS
 4/ FNLLFS
 5/ DPMFDUPS