

**BU806
BU807**

**NPN SILICON
DARLINGTON TRANSISTOR**



TO-220 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BU806 and BU807 types are NPN Silicon Darlington Transistors designed for high voltage, high current, fast switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^{\circ}\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Continuous Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance
Thermal Resistance

SYMBOL	BU806	BU807	UNITS
V_{CBO}	400	330	V
V_{CEV}	400	330	V
V_{CEO}	200	150	V
V_{EBO}	6.0		V
I_C	8.0		A
I_{CM}	15		A
I_B	2.0		A
P_D	60		W
T_J, T_{stg}	-65 to +150		$^{\circ}\text{C}$
Θ_{JA}	70		$^{\circ}\text{C/W}$
Θ_{JC}	2.08		$^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CES}	$V_{CE}=400\text{V}$ (BU806)			100	μA
I_{CES}	$V_{CE}=330\text{V}$ (BU807)			100	μA
I_{CEV}	$V_{CE}=400\text{V}, V_{EB}=6.0\text{V}$ (BU806)			100	μA
I_{CEV}	$V_{CE}=330\text{V}, V_{EB}=6.0\text{V}$ (BU807)			100	μA
I_{EBO}	$V_{EB}=6.0\text{V}$			3.5	mA
BV_{CEO}	$I_C=100\text{mA}$ (BU806)	200			V
BV_{CEO}	$I_C=100\text{mA}$ (BU807)	150			V
$V_{CE(SAT)}$	$I_C=5.0\text{A}, I_B=50\text{mA}$			1.5	V
$V_{BE(SAT)}$	$I_C=5.0\text{A}, I_B=50\text{mA}$			2.4	V
V_F	$I_F=4.0\text{A}$			2.0	V
t_{on}	$V_{CC}=100\text{V}, I_C=5.0\text{A}, I_{B1}=50\text{mA}, I_{B2}=500\text{mA}$		0.35		μs
t_{off}	$V_{CC}=100\text{V}, I_C=5.0\text{A}, I_{B1}=50\text{mA}, I_{B2}=500\text{mA}$		0.4	1.0	μs

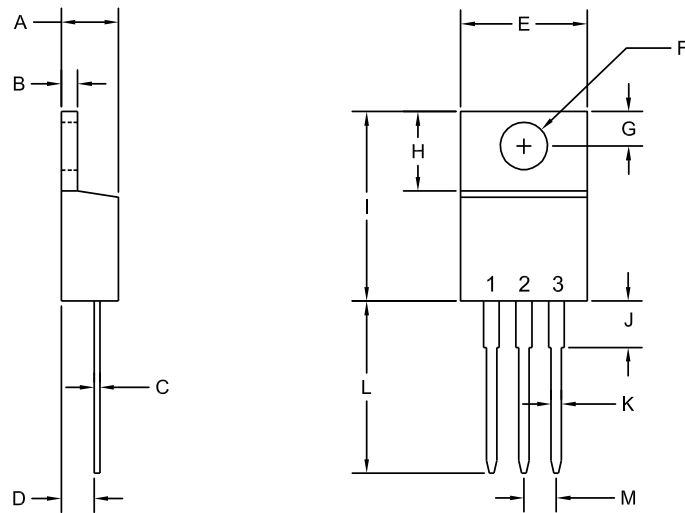
R0 (4-August 2011)

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TO-220 CASE - MECHANICAL OUTLINE



R2

LEAD CODE:

- 1) Base
- 2) Collector
- 3) Emitter
- Tab) Collector

MARKING:

FULL PART NUMBER

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.170	0.190	4.31	4.82
B	0.045	0.055	1.15	1.39
C	0.013	0.026	0.33	0.65
D	0.083	0.107	2.10	2.72
E	0.394	0.417	10.01	10.60
F (DIA)	0.140	0.157	3.55	4.00
G	0.100	0.118	2.54	3.00
H	0.230	0.270	5.85	6.85
I	0.560	0.625	14.23	15.87
J	-	0.250	-	6.35
K	0.025	0.038	0.64	0.96
L	0.500	0.579	12.70	14.70
M	0.090	0.110	2.29	2.79

TO-220 (REV: R2)

R0 (4-August 2011)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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