

Central TM

Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

BU406
BU407
BU408

NPN SILICON POWER TRANSISTOR

JEDEC TO-220 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR BU406 Series types are Silicon NPN High Voltage Power Transistors designed for fast switching, horizontal deflection output stages of monitors.

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

	SYMBOL	BU406	BU407	BU408	UNIT
Collector Base Voltage	V_{CBO}	400	330	400	V
Collector Emitter Voltage	V_{CES}	400	330	400	V
Collector Emitter Voltage	V_{CEO}	200	150	200	V
Emitter Base Voltage	V_{EBO}		6.0		V
Collector Current	I_C		7.0		A
Collector Current (PEAK)	I_{CM}		15		A
Base Current	I_B		4.0		A
Power Dissipation	P_D		60		W
Operating and Storage					
Junction Temperature	T_J, T_{STG}		-65 to +150		$^\circ\text{C}$
Thermal Resistance	θ_{JC}		2.08		$^\circ\text{C/W}$
Thermal Resistance	θ_{JA}		70		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	BU406		BU407		BU408		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
I_{CES}	$V_{CE}=\text{Rated } V_{CES}$		5.0		5.0		5.0	mA
I_{CES}	$V_{CE}=250\text{V}$ (406, 408), $V_{CE}=200\text{V}$ (407)		0.1		0.1		0.1	mA
I_{CES}	$V_{CE}=250\text{V}$ (406, 408), $V_{CE}=200\text{V}$ (407), $T_C=150^\circ\text{C}$		1.0		1.0		1.0	mA
I_{EBO}	$V_{EB}=6.0\text{V}$		1.0		1.0		1.0	mA
$V_{CE(S)}$	$I_C=5.0\text{A}$, $I_B=0.5\text{A}$		1.0		1.0		-	V
$V_{CE(S)}$	$I_C=6.0\text{A}$, $I_B=1.2\text{A}$		-		-		1.0	V
$V_{BE(S)}$	$I_C=5.0\text{A}$, $I_B=0.5\text{A}$		1.2		1.2		-	V
$V_{BE(S)}$	$I_C=6.0\text{A}$, $I_B=1.2\text{A}$		-		-		1.5	V
f_T	$V_{CE}=10\text{V}$, $I_C=0.5\text{A}$, $f=1.0\text{MHz}$	10		10		10		MHz
t_f	$V_{CC}=40\text{V}$, $I_C=5.0\text{A}$, $I_B=0.5\text{A}$		0.75		0.75		-	μs
t_f	$V_{CC}=40\text{V}$, $I_C=6.0\text{A}$, $I_B=1.2\text{A}$		-		-		0.4	μs
C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$		80TYP		80TYP		80TYP	pF
$I_{s/b}$	$V_{CE}=10\text{V}$, $t=1.0$ sec		6.0TYP		6.0TYP		6.0TYP	A

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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www.centralsemi.com/wwreps

Worldwide Distributors:

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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centralsemi.com/terms

Product End of Life Notification

PDN ID:	PDN01204
Notification Date:	1/20/22
Last Buy Date:	7/20/22
Last Shipment Date	1/20/23

Summary: The following power transistors are discontinued and now classified as of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

*** All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

<u>Central Part Number</u>	<u>Suggested Replacement</u>
BU406	N/A
MJE13007	N/A
MJE13007 SL	N/A

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. If you would like assistance, please visit <https://my. centralesemi.com/submit-inquiry?type=ER> to submit an online inquiry.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.