

CR16UD-02FP
CR16UD-04FP
CR16UD-08FP

DUAL, COMMON CATHODE
ULTRA FAST RECOVERY RECTIFIERS
16 AMP, 200 THRU 800 VOLT



TO-220FP CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CR16UD-02FP series devices are dual, ultra fast recovery silicon rectifiers designed for ultra fast switching applications requiring a low forward voltage drop.

MARKING: FULL PART NUMBER

FEATURES:

- High reliability
- High current capability
- UL flammability classification 94V-O
- Ultra fast recovery time
- Low forward voltage
- High surge capacity
- High voltage

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

	SYMBOL	CR16UD-02FP	CR16UD-04FP	CR16UD-08FP	UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	200	400	800	V
DC Blocking Voltage	V_R	200	400	800	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	280	560	V
Average Forward Current ($T_C=100^\circ\text{C}$)	I_O		16		A
Peak Forward Surge Current ($t_p=8.3\text{ms}$)	I_{FSM}		125		A
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +150		$^\circ\text{C}$
Typical Thermal Resistance	θ_{JA}		30		$^\circ\text{C/W}$
Typical Thermal Resistance	θ_{JC}		3.0		$^\circ\text{C/W}$

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

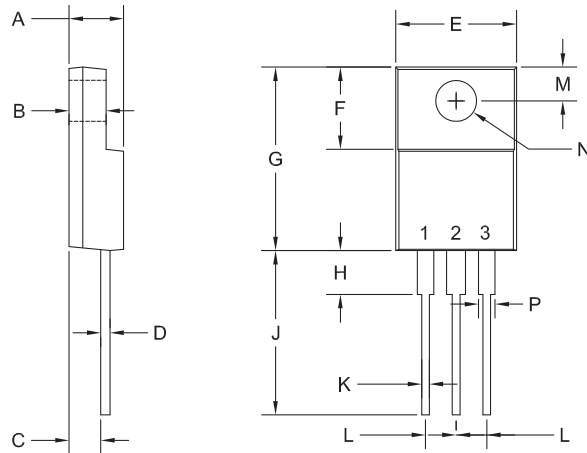
SYMBOL	TEST CONDITIONS	CR16UD-02FP		CR16UD-04FP		CR16UD-08FP		UNITS
		TYP	MAX	TYP	MAX	TYP	MAX	
I_R	$V_R=\text{Rated } V_{RRM}$	-	5.0	-	10	-	10	μA
I_R	$V_R=\text{Rated } V_{RRM}, T_C=150^\circ\text{C}$	-	250	-	500	-	500	μA
V_F	$I_F=8.0\text{A}$	-	1.0	-	1.3	-	1.7	V
V_F	$I_F=8.0\text{A}, T_C=150^\circ\text{C}$	-	0.895	-	1.1	-	1.2	V
t_{rr}	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	35	50	35	50	95	100	ns
C_J	$V_R=4.0\text{V}, f=1.0\text{MHz}$	170	-	170	-	130	-	pF

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TO-220FP CASE - MECHANICAL OUTLINE

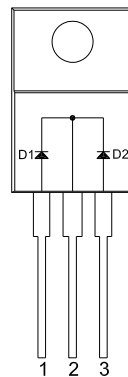


SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.165	0.202	4.20	5.12
B	0.090	0.130	2.30	3.30
C	0.098	0.122	2.50	3.10
D	-	0.031	-	0.80
E	0.382	0.418	9.70	10.63
F	0.238	0.276	6.06	7.00
G	0.583	0.640	14.80	16.25
H	-	0.161	-	4.10
J	0.506	0.543	12.85	13.80
K	0.020	0.031	0.50	0.79
L	0.100		2.54	
M	0.120	0.140	3.05	3.55
N (DIA)	0.116	0.134	2.95	3.40
P	0.039	0.058	1.00	1.47

TO-220FP (REV: R4)

R4

PIN CONFIGURATION



LEAD CODE:

- 1) Anode D1
- 2) Cathode D1, D2
- 3) Anode D2

MARKING:

FULL PART NUMBER

R4 (20-May 2015)

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

Corporate Headquarters & Customer Support Team

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Worldwide Distributors:
www.centrasemi.com/wwdistributors

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.centrasemi.com/terms



<https://www.centrasemi.com>

Product End of Life Notification

PDN ID:	PDN01260
Notification Date:	6/27/23
Last Buy Date:	Stock Only
Last Shipment Date	Stock Only

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. Orders can only be accepted for products with available inventory on hand.

You may have purchased one or more of the products listed. Please do not hesitate to contact your local Central Semiconductor sales representative with any questions or needs you may have. Central regrets any inconvenience this may cause.

Sincerely,

Central Semiconductor Corp.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor 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.



<https://www.centalsemi.com>

Product End of Life Notification

PDN ID:	PDN01260
Notification Date:	6/27/23
Last Buy Date:	Stock Only
Last Shipment Date	Stock Only

Summary: The following rectifiers have been discontinued and are now classified as End of Life (EOL).

Although Central Semiconductor 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 Portfolio Management. 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.**

Central Part Number	Suggested Replacement
CR16UD-08FP	N/A
CR5U-040 BK	N/A
CR5U-040 TR	N/A
CR5U-060 BK	N/A
CR5U-080 BK	N/A
1N5402 BK	N/A
1N5402 TR	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.centalsemi.com/submit-inquiry?type=ER> to submit an online inquiry.

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Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Central Semiconductor:

[CR16UD-02FP](#) [CR16UD-02FP TIN/LEAD](#)