

# Central<sup>TM</sup> Semiconductor Corp.

145 Adams Ave., Hauppauge, NY 11788 USA  
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Manufacturers of World Class Discrete Semiconductors  
www.centrasemi.com

CN645 THRU CN649

GLASS PASSIVATED JUNCTION  
GENERAL PURPOSE DIODE

DO-41SP CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CN645 Series types are Glass Passivated Junction general-purpose diodes, which are well constructed, highly reliable components designed for use in all types of commercial, industrial, entertainment, computer and automotive applications.

## MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

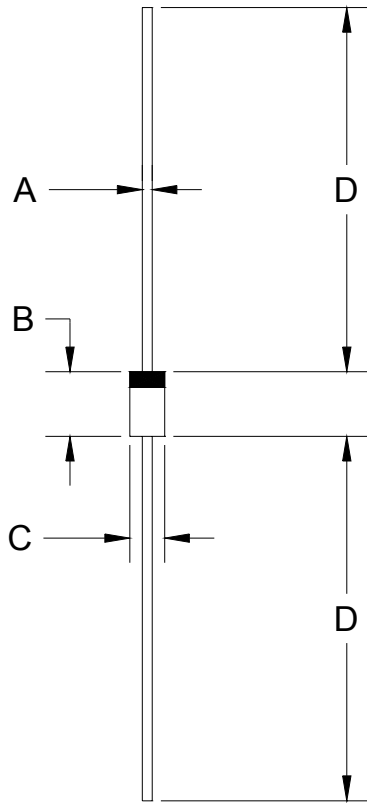
	SYMBOL	CN645	CN646	CN647	CN648	CN649	UNITS
Peak Working Reverse Voltage	V <sub>RWM</sub>	225	300	400	500	600	V
Average Forward Current	I <sub>O</sub>			400			mA
Average Forward Current (T <sub>A</sub> =150°C)	I <sub>O</sub>			150			mA
Peak Forward Surge Current	I <sub>FSM</sub>			3.0			A
Power Dissipation	P <sub>D</sub>			600			mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>			-65 to 150			°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	CN645		CN646		CN647		CN648		CN649		UNITS
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
V <sub>BR</sub>	I <sub>R</sub> =100μA, T <sub>A</sub> =100°C	275		360		480		600		720		V
I <sub>R</sub>	V <sub>R</sub> =RATED V <sub>RWM</sub> , T <sub>A</sub> =100°C		15		15		20		20		25	μA
I <sub>R</sub>	V <sub>R</sub> =RATED V <sub>RWM</sub>		0.2		0.2		0.2		0.2		0.2	μA
V <sub>F</sub>	I <sub>F</sub> =400mA		1.0		1.0		1.0		1.0		1.0	V
C <sub>T</sub>	V <sub>R</sub> =12V, f=1.0MHz		11 TYP		11 TYP		11 TYP		11 TYP		11 TYP	pF

(SEE REVERSE SIDE)

DO-41SP PACKAGE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.021	0.025	0.53	0.64
B	0.160	0.205	4.06	5.21
C	0.080	0.107	2.03	2.72
D	1.000	-	25.40	-

DO-41SP (REV: R1)

R1

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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
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[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

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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.centrasemi.com/terms](http://www.centrasemi.com/terms)



<http://www.centrasemi.com>

# Product End of Life Notification

<b>PDN ID:</b>	PDN01056
<b>Notification Date:</b>	8/24/16
<b>Last Buy Date:</b>	2/24/17
<b>Last Shipment Date</b>	8/24/17

Summary: The CN646, CN647, and CN648, general purpose diodes in the DO-41SP case are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by various 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 Product Management Process. Any replacement product will be noted below. The effective date for placing the last purchase order will be six(6) months from the date of this notice and twelve(12) months from the notice date for final shipments; this may be extended if inventory is available.

<u>Central Part Number</u>	<u>Replacement</u>
CN646 BK	CN649 BK
CN646 TR	CN649 TR
CN647 BK	CN649 BK
CN647 TR	CN649 TR
CN648 BK	CN649 BK
CN648 TR	CN649 TR

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. Please email your requests to [engineering@centrasemi.com](mailto:engineering@centrasemi.com).

**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.



<http://www.centrasemi.com>

# Product End of Life Notification

<b>PDN ID:</b>	PDN01076
<b>Notification Date:</b>	3/21/18
<b>Last Buy Date:</b>	N/A
<b>Last Shipment Date</b>	N/A

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. We are unable to accept any further orders for these products **unless** we have 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.

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# Product End of Life Notification

<b>PDN ID:</b>	PDN01076
<b>Notification Date:</b>	3/21/18
<b>Last Buy Date:</b>	N/A
<b>Last Shipment Date</b>	N/A

Summary: The CN645 series of general purpose rectifiers is being discontinued; these devices are now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by various 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 Product Management Process. Any replacement product will be noted below. The effective date for placing the last purchase order will be six(6) months from the date of this notice and twelve(12) months from the notice date for final shipments; this may be extended if inventory is available.

<u>Central Part Number</u>	<u>Replacement</u>
CN645 BK	N/A
CN645 TR	N/A
CN649 BK	N/A
CN649 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. Please email your requests to [engineering@centrasemi.com](mailto:engineering@centrasemi.com).

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