

**CMRSH-4DO**  
**SURFACE MOUNT SILICON  
DUAL, ISOLATED, OPPOSING  
SCHOTTKY DIODE**



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

**DESCRIPTION:** The CENTRAL SEMICONDUCTOR CMRSH-4DO are dual, isolated, opposing high quality Schottky diodes designed for applications where very small size and operational efficiency are prime requirements.

**MARKING CODE: CV**

**FEATURES:**

- Current ( $I_O=200\text{mA}$ )
- Low forward voltage drop ( $V_F=0.35\text{V TYP @ } 1.0\text{mA}$ )
- Low reverse current ( $25\text{nA TYP @ } 30\text{V}$ )
- Extremely fast switching ( $5.0\text{ns MAX}$ )
- Small  $1.0 \times 1.0 \times 0.5\text{mm SOT-963}$  surface mount package
- Versatile multi-configurable device

**APPLICATIONS:**

- DC-DC converters
- Voltage clamping
- Protection circuits
- Battery charging circuits

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

Peak Repetitive Reverse Voltage  
Average Forward Current  
Peak Forward Surge Current,  $t_p=8.3\text{ms}$   
Power Dissipation  
Operating Junction Temperature  
Storage Temperature  
Thermal Resistance

**SYMBOL**

$V_{RRM}$  40  
 $I_O$  200  
 $I_{FSM}$  600  
 $P_D$  125  
 $T_J$  -65 to +125  
 $T_{stg}$  -65 to +150  
 $\Theta_{JA}$  800

**UNITS**

V  
mA  
mA  
mW  
 $^\circ\text{C}$   
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

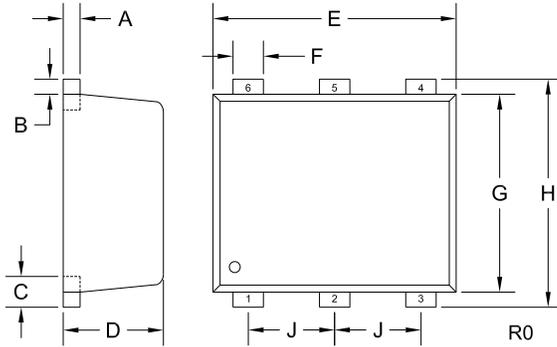
**ELECTRICAL CHARACTERISTICS PER DIODE:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_R$	$V_R=30\text{V}$		25	200	nA
$BV_R$	$I_R=10\mu\text{A}$	40			V
$V_F$	$I_F=1.0\text{mA}$		0.35	0.38	V
$V_F$	$I_F=15\text{mA}$		0.55	0.65	V
$V_F$	$I_F=40\text{mA}$		0.77	1.00	V
$C_J$	$V_R=0, f=1.0\text{MHz}$			5.0	pF
$t_{rr}$	$I_F=I_R=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$			5.0	ns

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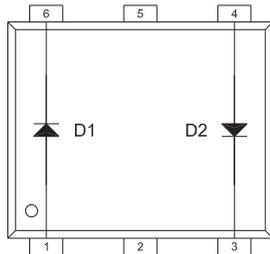
**SOT-963 CASE - MECHANICAL OUTLINE**



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.002	0.006	0.050	0.150
B	0.002	0.006	0.050	0.150
C	0.005	0.007	0.125	0.175
D	0.016	0.020	0.400	0.500
E	0.037	0.041	0.950	1.050
F	0.004	0.008	0.100	0.200
G	0.030	0.033	0.750	0.850
H	0.037	0.041	0.950	1.050
J	0.014		0.350	

SOT-963 (REV: R0)

**PIN CONFIGURATION**

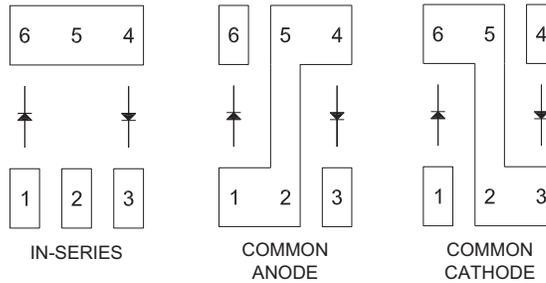


**LEAD CODE:**

- 1) Anode D1
- 2) NC
- 3) Cathode D2
- 4) Anode D2
- 5) NC
- 6) Cathode D1

**MARKING CODE: CV**

**SUGGESTED MOUNTING PAD CONFIGURATIONS**



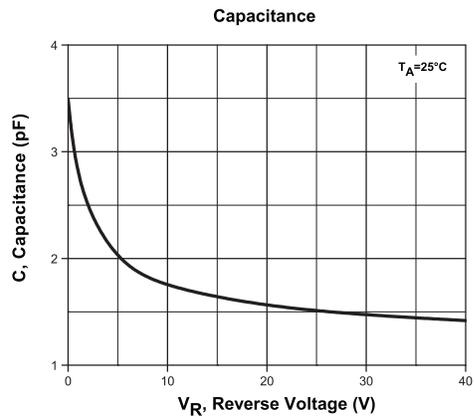
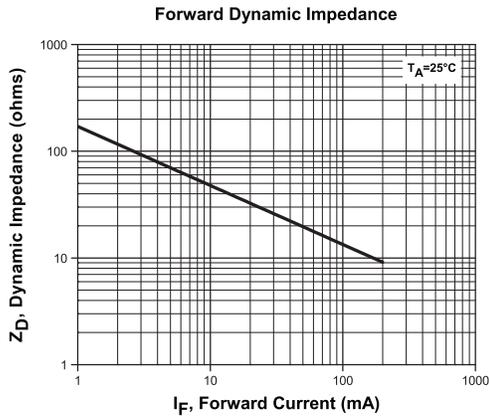
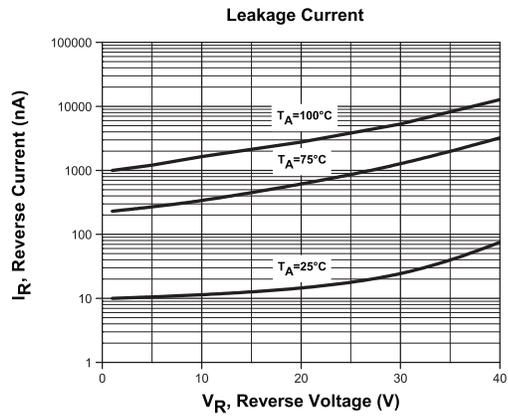
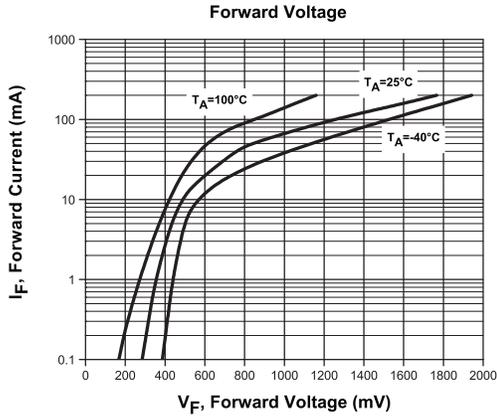
**Note:**  
**Two devices easily configurable**  
**as a bridge rectifier.**

R2 (3-August 2015)

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**TYPICAL ELECTRICAL CHARACTERISTICS**

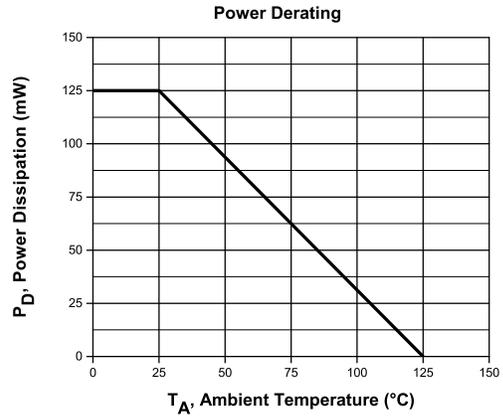
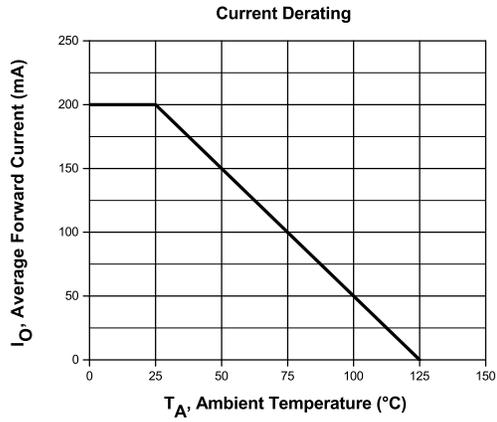


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TYPICAL ELECTRICAL CHARACTERISTICS



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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

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