

**CMRSH-4DO****SURFACE MOUNT SILICON  
DUAL, ISOLATED, OPPOSING  
SCHOTTKY DIODE**
[www.centra-semi.com](http://www.centra-semi.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

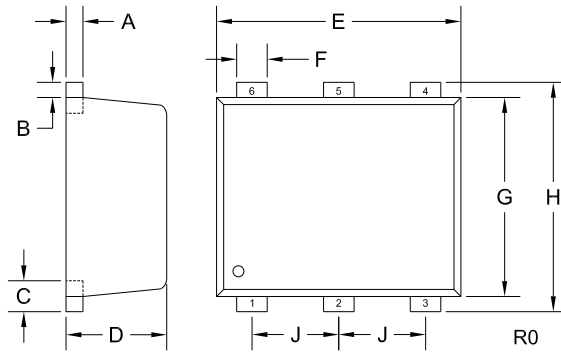
R2 (3-August 2015)

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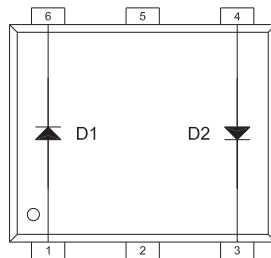
# SOT-963 CASE - MECHANICAL OUTLINE



SYMBOL	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

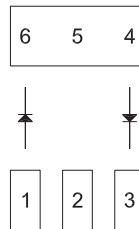


### LEAD CODE:

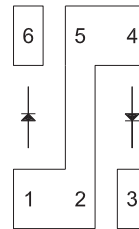
- 1) Anode D1
- 2) NC
- 3) Cathode D2
- 4) Anode D2
- 5) NC
- 6) Cathode D1

### MARKING CODE: CV

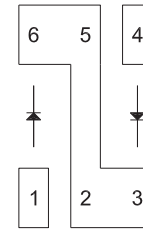
## SUGGESTED MOUNTING PAD CONFIGURATIONS



IN-SERIES



COMMON  
ANODE



COMMON  
CATHODE

### Note:

Two devices easily configurable  
as a bridge rectifier.

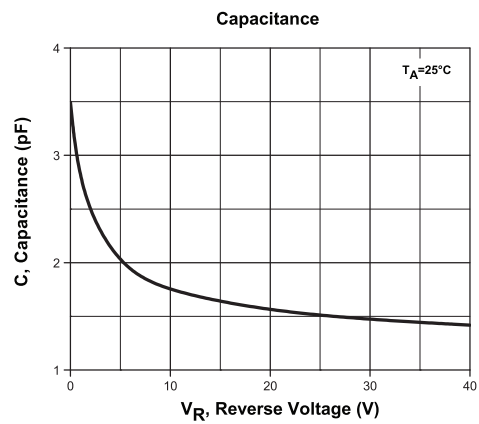
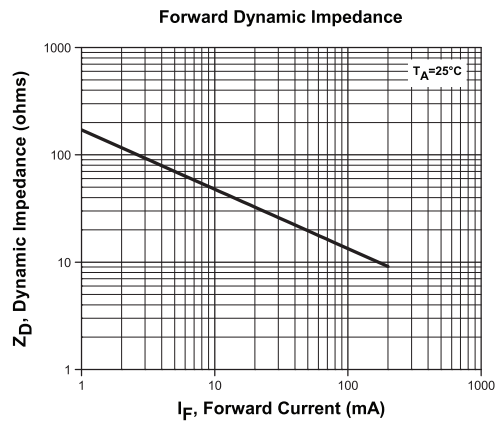
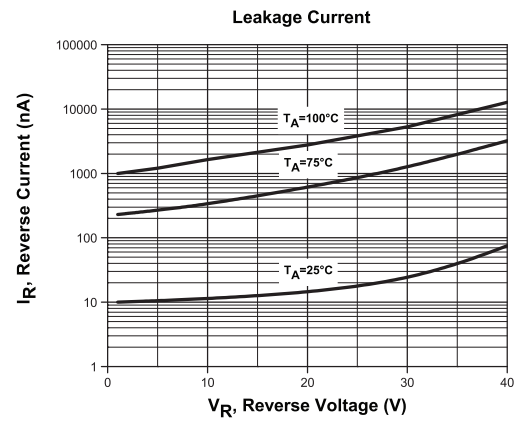
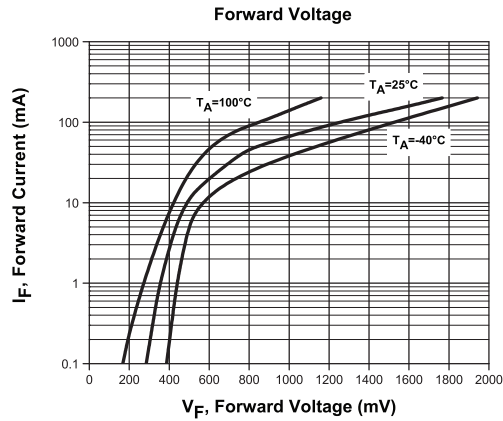
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## TYPICAL ELECTRICAL CHARACTERISTICS



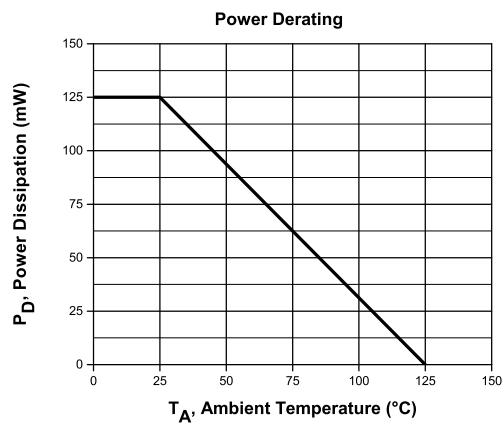
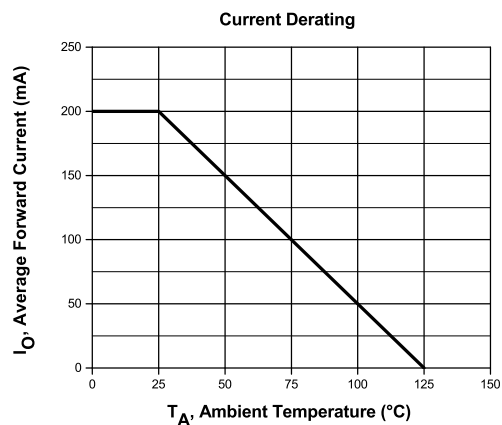
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#### **SERVICES**

- Bonded Inventory
- Custom Electrical Screening
- Custom Electrical Characteristic Curves
- SPICE Models
- Custom Packaging
- Package Base Options
- Custom Device Development/ Multi Discrete Modules (MDM™)
- Bare Die Available for Hybrid Applications

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