

CMLSH2-4LA CMLSH2-4LS  
CMLSH2-4LC CMLSH2-4LSB

**SURFACE MOUNT  
DUAL PAIR, LOW  $V_F$   
SILICON SCHOTTKY DIODES**

**PICOmini™**



**SOT-563 CASE**

• Devices are **Halogen Free** by design



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMLSH2-4L Series consists of Dual pairs of Common Anode, Common Cathode, and In-Series Low  $V_F$  Schottky Diodes, manufactured in a PICOmini™ SOT-563 surface mount package.

**DEVICE CONFIGURATIONS:**

|             |                           |                          |
|-------------|---------------------------|--------------------------|
| CMLSH2-4LA  | DUAL PAIR, COMMON ANODE   | <b>MARKING CODE: 4AL</b> |
| CMLSH2-4LC  | DUAL PAIR, COMMON CATHODE | <b>MARKING CODE: 4CL</b> |
| CMLSH2-4LS  | DUAL PAIR, IN SERIES      | <b>MARKING CODE: 4SL</b> |
| CMLSH2-4LSB | DUAL PAIR, IN SERIES      | <b>MARKING CODE: 4SB</b> |

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

|   | SYMBOL         |             | UNITS              |
|---|----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage               | $V_{RRM}$      | 40          | V                  |
| Continuous Forward Current                    | $I_F$          | 200         | mA                 |
| Peak Repetitive Forward Current               | $I_{FRM}$      | 300         | mA                 |
| Peak Forward Surge Current, $t_p=10\text{ms}$ | $I_{FSM}$      | 600         | mA                 |
| Power Dissipation (Note 1)                    | $P_D$          | 350         | mW                 |
| Power Dissipation (Note 2)                    | $P_D$          | 300         | mW                 |
| Power Dissipation (Note 3)                    | $P_D$          | 150         | mW                 |
| Operating and Storage Junction Temperature    | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| Thermal Resistance (Note 1)                   | $\Theta_{JA}$  | 357         | $^\circ\text{C/W}$ |

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

| SYMBOL   | TEST CONDITIONS   | MIN | TYP  | MAX  | UNIT |
|----------|---|-----|------|------|------|
| $I_R$    | $V_R=30\text{V}$  |     | 100  | 200  | nA   |
| $BV_R$   | $I_R=100\mu\text{A}$                                      | 40  | 55   |      | V    |
| $V_F$    | $I_F=100\mu\text{A}$                                      |     | 0.24 | 0.26 | V    |
| $V_F$    | $I_F=500\mu\text{A}$                                      |     | 0.29 | 0.31 | V    |
| $V_F$    | $I_F=1.0\text{mA}$  |     | 0.31 | 0.33 | V    |
| $V_F$    | $I_F=50\text{mA}$   |     | 0.54 | 0.60 | V    |
| $V_F$    | $I_F=100\text{mA}$  |     | 0.67 | 0.75 | V    |
| $C_T$    | $V_R=1.0\text{V}, f=1.0\text{MHz}$                        |     |      | 10   | pF   |
| $t_{rr}$ | $I_F=I_R=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$ |     |      | 5.0  | ns   |

Notes: (1) Ceramic or aluminum core PC Board with copper mounting pad area of 4.0mm<sup>2</sup>  
(2) FR-4 Epoxy PC Board with copper mounting pad area of 4.0mm<sup>2</sup>  
(3) FR-4 Epoxy PC Board with copper mounting pad area of 1.4mm<sup>2</sup>

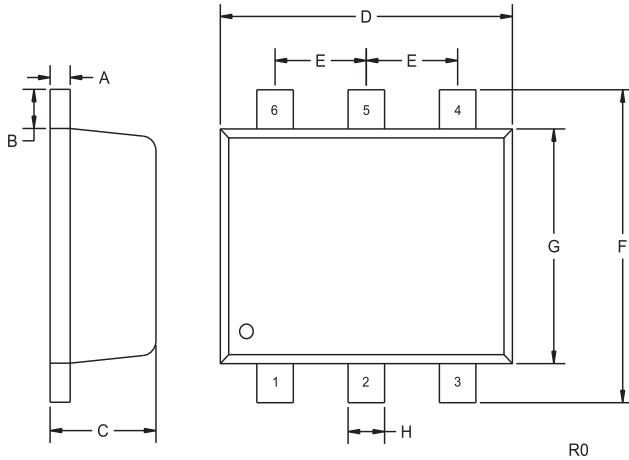
R3 (20-January 2010)

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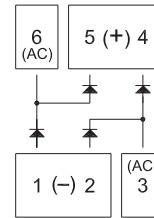
SOT-563 CASE - MECHANICAL OUTLINE



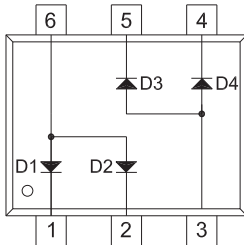
| SYMBOL | DIMENSIONS |       | DIMENSIONS  |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.004      | 0.007 | 0.10        | 0.18 |
| B      | 0.008      |       | 0.20        |      |
| C      | 0.022      | 0.024 | 0.56        | 0.60 |
| D      | 0.059      | 0.067 | 1.50        | 1.70 |
| E      | 0.020      |       | 0.50        |      |
| F      | 0.061      | 0.067 | 1.55        | 1.70 |
| G      | 0.047      |       | 1.20        |      |
| H      | 0.006      | 0.012 | 0.15        | 0.30 |

SOT-563 (REV: R0)

SUGGESTED MOUNTING PAD CONFIGURATION  
(FOR CMLSH2-4LSB BRIDGE RECTIFIER)



PIN CONFIGURATIONS

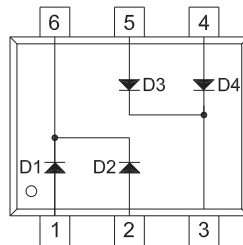


**CMLSH2-4LA**

**LEAD CODE:**

- 1) Cathode D1
- 2) Cathode D2
- 3) Anode D3, D4
- 4) Cathode D4
- 5) Cathode D3
- 6) Anode D1, D2

**MARKING CODE: 4AL**

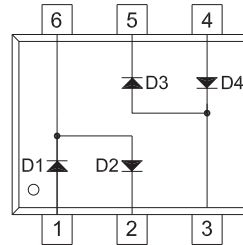


**CMLSH2-4LC**

**LEAD CODE:**

- 1) Anode D1
- 2) Anode D2
- 3) Cathode D3, D4
- 4) Anode D4
- 5) Anode D3
- 6) Cathode D1, D2

**MARKING CODE: 4CL**

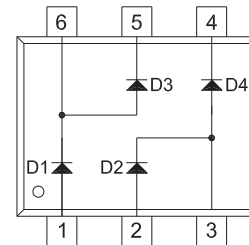


**CMLSH2-4LS**

**LEAD CODE:**

- 1) Anode D1
- 2) Cathode D2
- 3) Anode D3, Cathode D4
- 4) Anode D4
- 5) Cathode D3
- 6) Cathode D1, Anode D2

**MARKING CODE: 4SL**



**CMLSH2-4LSB**

**LEAD CODE:**

- 1) Anode D1
- 2) Anode D2
- 3) Cathode D2, Anode D4
- 4) Cathode D4
- 5) Cathode D3
- 6) Cathode D1, Anode D3

**MARKING CODE: 4SB**

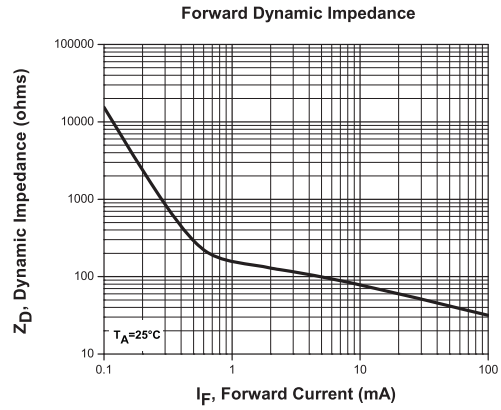
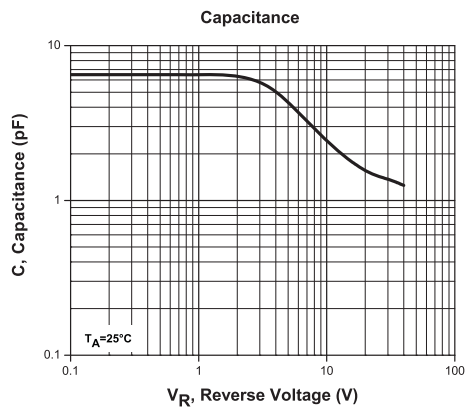
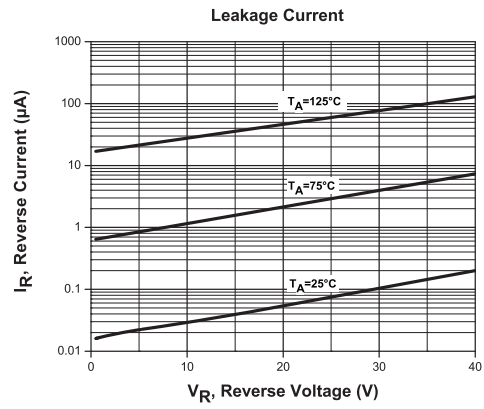
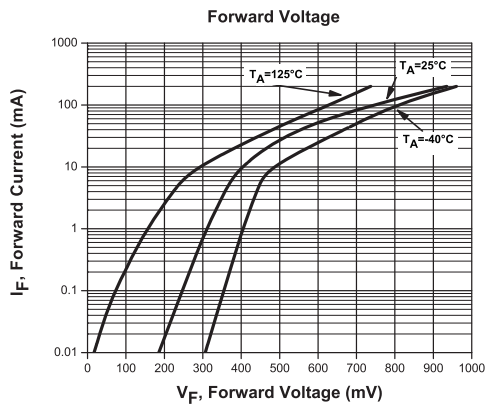
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TYPICAL ELECTRICAL CHARACTERISTICS



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