

CMLD2004  
 CMLD2004A  
 CMLD2004C  
 CMLD2004S  
 CMLD2004DO

**SURFACE MOUNT  
 DUAL, HIGH VOLTAGE  
 SILICON SWITCHING DIODES**

**PICO**mini™



**SOT-563 CASE**

**Central**™  
 Semiconductor Corp.

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMLD2004 SERIES contains two (2) High Voltage Silicon Switching Diodes, manufactured by the epitaxial planar process, epoxy molded in a PICOmini™ surface mount package, designed for applications requiring high voltage capability.

The following configurations are available:

CMLD2004 DUAL, ISOLATED  
 CMLD2004A DUAL, COMMON ANODE  
 CMLD2004C DUAL, COMMON CATHODE  
 CMLD2004S DUAL, IN SERIES  
 CMLD2004DO DUAL, ISOLATED OPPOSING

**MARKING CODE: 04D**  
**MARKING CODE: 04A**  
**MARKING CODE: 04C**  
**MARKING CODE: 04S**  
**MARKING CODE: 04O**

**MAXIMUM RATINGS:** (T<sub>A</sub>=25°C)

	SYMBOL		UNITS
Continuous Reverse Voltage	V <sub>R</sub>	240	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	300	V
Peak Repetitive Reverse Current	I <sub>O</sub>	200	mA
Continuous Forward Current	I <sub>F</sub>	225	mA
Peak Repetitive Forward Current	I <sub>FRM</sub>	625	mA
Forward Surge Current, tp=1 μs	I <sub>FSM</sub>	4.0	A
Forward Surge Current, tp=1 s	I <sub>FSM</sub>	1.0	A
Power Dissipation	P <sub>D</sub>	250	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	θ <sub>JA</sub>	500	°C/W

**ELECTRICAL CHARACTERISTICS PER DIODE:** (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>R</sub>	V <sub>R</sub> =240V		100	nA
I <sub>R</sub>	V <sub>R</sub> =240V, T <sub>A</sub> =150°C		100	μA
BV <sub>R</sub>	I <sub>R</sub> =100μA	300		V
V <sub>F</sub>	I <sub>F</sub> =100mA		1.0	V
C <sub>T</sub>	V <sub>R</sub> =0, f=1.0 MHz		5.0	pF
t <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =30mA, Rec. to 3.0mA, R <sub>L</sub> =100Ω		50	ns

**SURFACE MOUNT  
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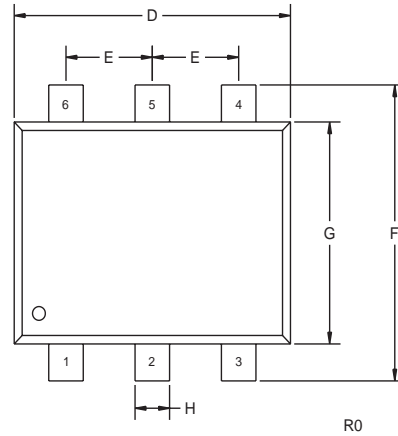
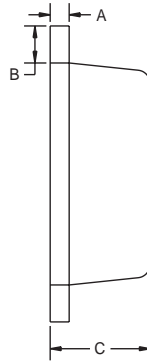
**SOT-563 CASE - MECHANICAL OUTLINE**

SYMBOL	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)

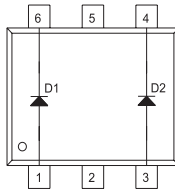
**MARKING CODE:**

**CMLD2004: 04D**  
**CMLD2004A: 04A**  
**CMLD2004C: 04C**  
**CMLD2004S: 04S**  
**CMLD2004DO: 04O**



**Pin Configuration**

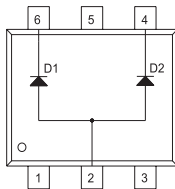
**CMLD2004**



**LEAD CODE:**

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

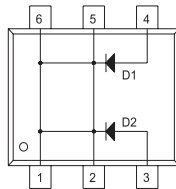
**CMLD2004A**



**LEAD CODE:**

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

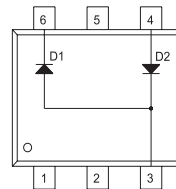
**CMLD2004C**



**LEAD CODE:**

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

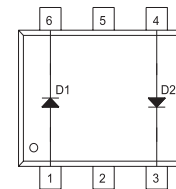
**CMLD2004S**



**LEAD CODE:**

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

**CMLD2004DO**



**LEAD CODE:**

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