

CMKD6000

**SURFACE MOUNT SILICON
DUAL PAIR, IN SERIES
ULTRA LOW LEAKAGE
SWITCHING DIODE**



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMKD6000 consists of two pair of electrically isolated, series configured Ultra Low Leakage Switching Diodes manufactured by the epitaxial planar process, epoxy molded in an SOT-363 surface mount package.

MARKING CODE: CK0

APPLICATIONS:

- Handheld Medical Devices
- Battery Operated Equipment
- High Speed Data Line Steering

FEATURES:

- Low Total Conduction Losses

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

| |
|--|
| Continuous Reverse Voltage |
| Peak Repetitive Reverse Voltage |
| Continuous Forward Current |
| Peak Repetitive Forward Current |
| Peak Forward Surge Current, $t_p=1.0\mu\text{s}$ |
| Peak Forward Surge Current, $t_p=1.0\text{s}$ |
| Power Dissipation |
| Operating and Storage Junction Temperature |
| Thermal Resistance |

SYMBOL

| | |
|----------------|-------------|
| V_R | 75 |
| V_{RRM} | 100 |
| I_F | 250 |
| I_{FRM} | 500 |
| I_{FSM} | 4.0 |
| I_{FSM} | 1.0 |
| P_D | 250 |
| T_J, T_{stg} | -65 to +150 |
| θ_{JA} | 500 |

UNITS

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

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

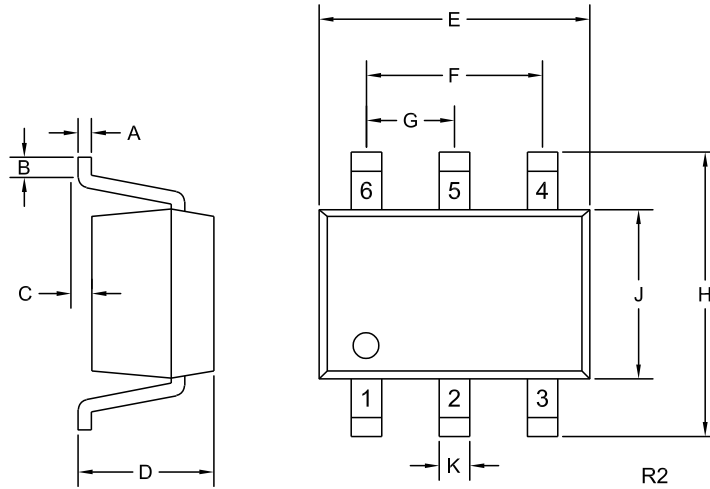
| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|----------|---|-----|------|------|---------------|
| I_R | $V_R=75\text{V}$ | | 35 | 500 | pA |
| I_R | $V_R=5.0, T_A=50^\circ\text{C}$ | | 10 | 100 | pA |
| BV_R | $I_R=100\mu\text{A}$ | 100 | 120 | | V |
| V_F | $I_F=1.0\text{mA}$ | | 0.77 | 0.85 | V |
| V_F | $I_F=10\text{mA}$ | | 0.85 | 0.95 | V |
| V_F | $I_F=100\text{mA}$ | | 0.96 | 1.1 | V |
| C_J | $V_R=0, f=1.0\text{MHz}$ | | 1.7 | 2.0 | pF |
| t_{rr} | $I_R=I_F=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$ | | | 3.0 | μs |

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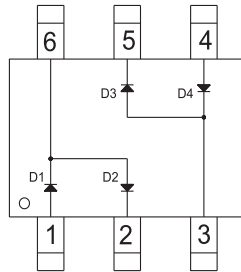
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SOT-363 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



| SYMBOL | INCHES | | MILLIMETERS | |
|--------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.004 | 0.010 | 0.10 | 0.25 |
| B | 0.005 | - | 0.12 | - |
| C | 0.000 | 0.004 | 0.00 | 0.10 |
| D | 0.031 | 0.043 | 0.80 | 1.10 |
| E | 0.071 | 0.087 | 1.80 | 2.20 |
| F | 0.051 | | 1.30 | |
| G | 0.026 | | 0.65 | |
| H | 0.075 | 0.091 | 1.90 | 2.30 |
| J | 0.043 | 0.055 | 1.10 | 1.40 |
| K | 0.006 | 0.012 | 0.15 | 0.30 |

SOT-363 (REV: R2)

LEAD CODE:

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

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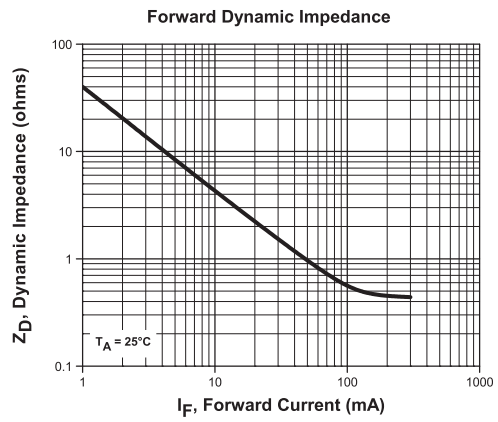
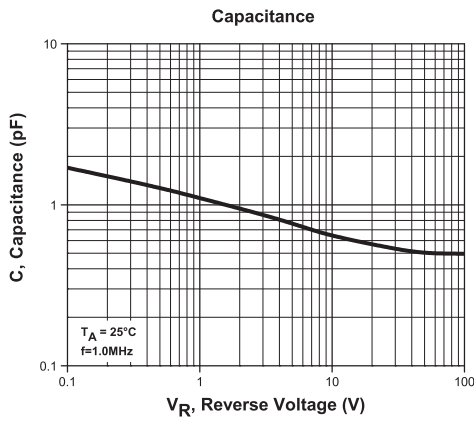
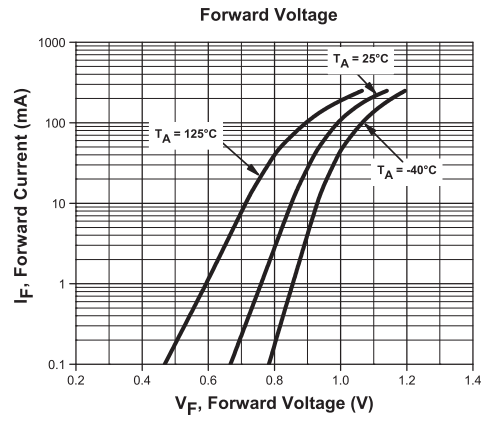
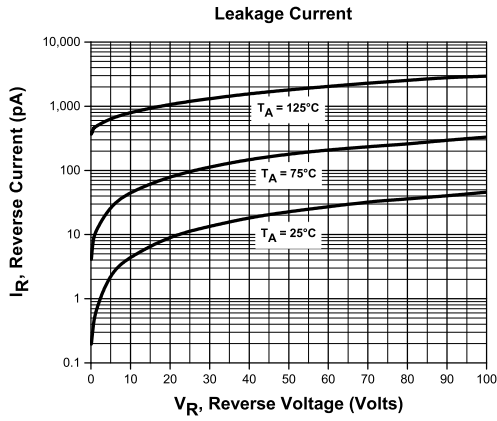
R2 (26-February 2016)

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TYPICAL ELECTRICAL CHARACTERISTICS



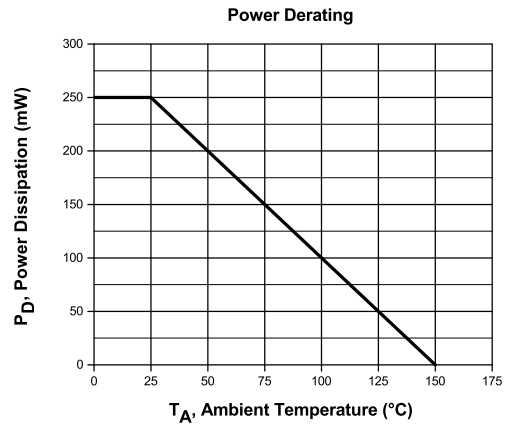
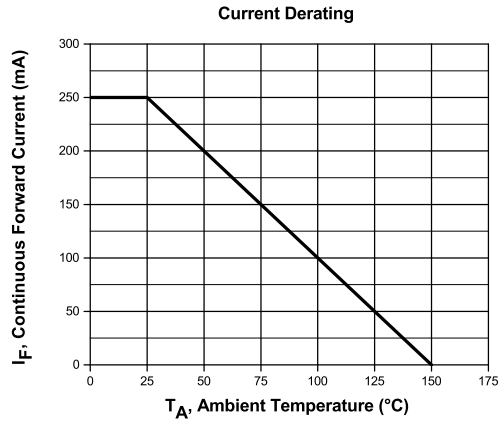
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TYPICAL ELECTRICAL CHARACTERISTICS



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OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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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