

CMDSH05-45
SURFACE MOUNT SILICON
LOW V_F
SCHOTTKY DIODE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMDSH05-45 is a 45 volt Schottky diode packaged in a space saving surface mount SOD-323 case. This device has been designed for applications requiring a low forward voltage drop.

MARKING CODE: 45C



SOD-323 CASE

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

| | | | |
|--|----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 45 | V |
| Continuous Forward Current | I_F | 500 | mA |
| Peak Repetitive Forward Current, $t_p \leq 1.0\text{ms}$ | I_{FRM} | 3.5 | A |
| Peak Forward Surge Current, $t_p = 8.0\text{ms}$ | I_{FSM} | 10 | A |
| Power Dissipation | P_D | 250 | mW |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | 500 | $^\circ\text{C/W}$ |

| SYMBOL | | UNITS |
|----------------|-------------|--------------------|
| V_{RRM} | 45 | V |
| I_F | 500 | mA |
| I_{FRM} | 3.5 | A |
| I_{FSM} | 10 | A |
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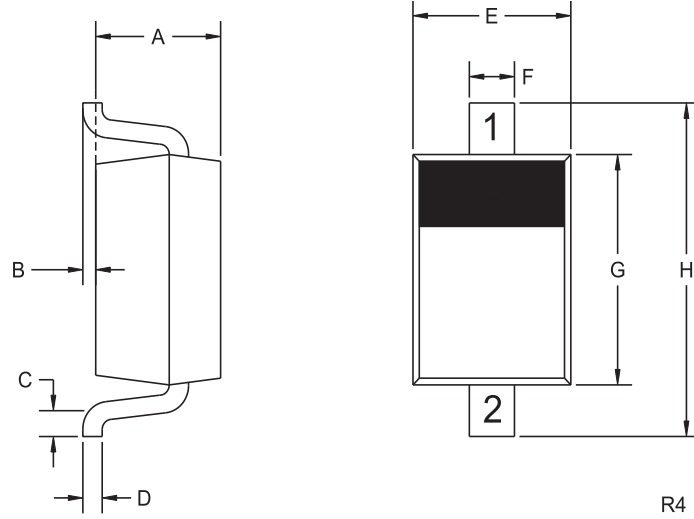
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|--------|---|-----|-----|------|---------------|
| I_R | $V_R=30\text{V}$ | | 60 | 100 | μA |
| I_R | $V_R=30\text{V}, T_A=85^\circ\text{C}$ | | 2.5 | | mA |
| I_R | $V_R=30\text{V}, T_A=100^\circ\text{C}$ | | 6.0 | | mA |
| BV_R | $I_R=500\mu\text{A}$ | 45 | | | V |
| V_F | $I_F=100\mu\text{A}$ | | | 0.13 | V |
| V_F | $I_F=1.0\text{mA}$ | | | 0.21 | V |
| V_F | $I_F=10\text{mA}$ | | | 0.27 | V |
| V_F | $I_F=100\text{mA}$ | | | 0.35 | V |
| V_F | $I_F=500\text{mA}$ | | | 0.47 | V |
| C_J | $V_R=1.0\text{V}, f=1.0\text{MHz}$ | | | 50 | pF |

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SOD-323 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Cathode
- 2) Anode

MARKING CODE: 45C

| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.031 | 0.039 | 0.80 | 1.00 |
| B | 0.000 | 0.004 | 0.00 | 0.10 |
| C | 0.008 | - | 0.20 | - |
| D | 0.004 | 0.007 | 0.11 | 0.19 |
| E | 0.045 | 0.053 | 1.15 | 1.35 |
| F | - | 0.014 | - | 0.35 |
| G | 0.063 | 0.071 | 1.60 | 1.80 |
| H | 0.094 | 0.102 | 2.40 | 2.60 |

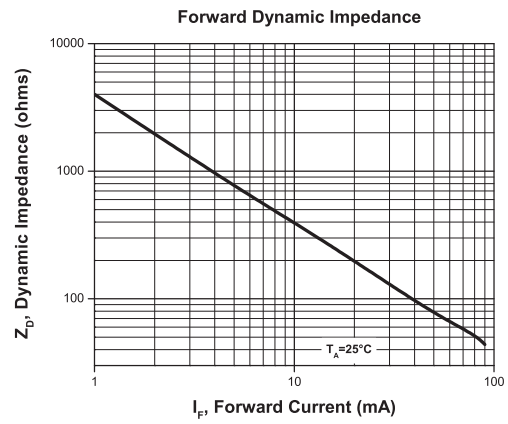
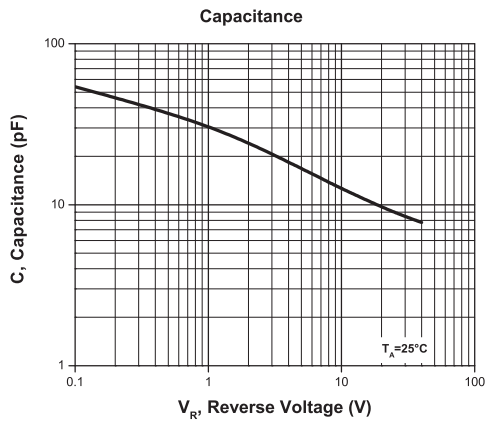
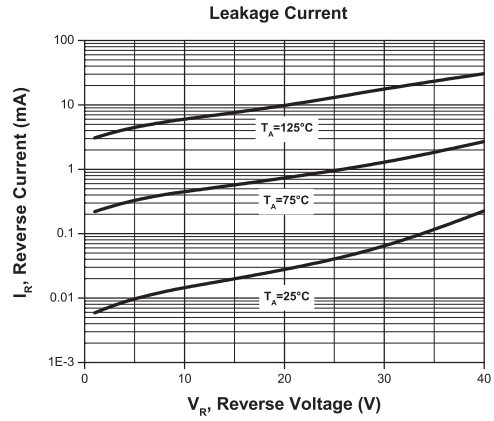
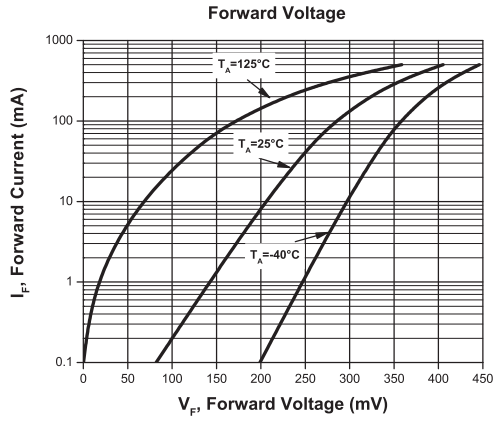
SOD-323 (REV: R4)

R1 (30-September 2015)

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TYPICAL ELECTRICAL CHARACTERISTICS

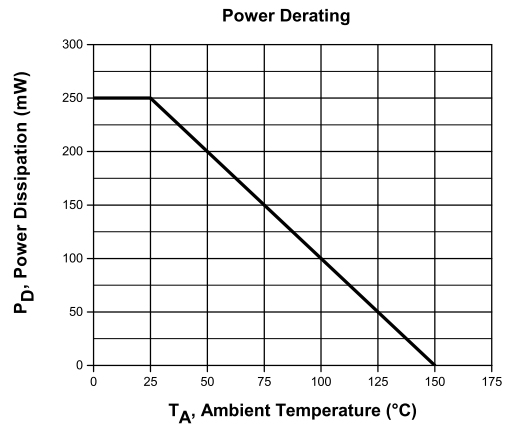
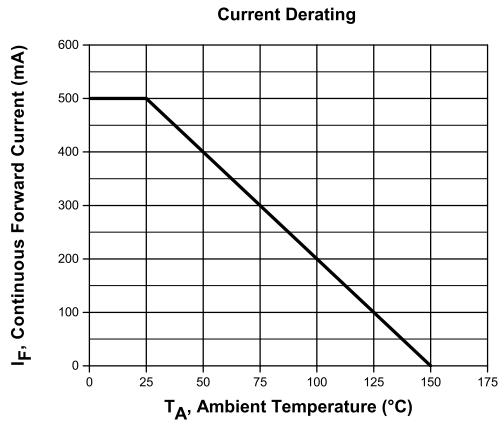


R1 (30-September 2015)

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TYPICAL ELECTRICAL CHARACTERISTICS



R1 (30-September 2015)

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).

CONTACT US

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