

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

CDSH-2
CDSH-4

SILICON SCHOTTKY BARRIER DIODE

JEDEC DO-35 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CDSH Series types are Silicon Schottky Barrier Diodes designed for general purpose fast switching applications. This series is an ideal candidate to replace germanium switching diodes and conventional silicon switching diodes where ultra fast switching speeds and very low forward voltage drops are required. Higher voltage devices are available on special order.

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

| | <u>SYMBOL</u> | <u>CDSH-2</u> | <u>CDSH-4</u> | <u>UNITS</u> |
|---|----------------|---------------|---------------|------------------|
| Peak Inverse Voltage | PIV | 20 | 40 | V |
| Average Forward Current | I_O | 200 | | mA |
| Peak Forward Surge Current (1 Cycle, 8ms) | I_{FSM} | 15 | | A |
| Power Dissipation | P_D | 400 | | mW |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 to +200 | | $^\circ\text{C}$ |

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

| <u>SYMBOL</u> | <u>TEST CONDITIONS</u> | <u>MIN</u> | <u>TYP</u> | <u>MAX</u> | <u>UNITS</u> |
|---------------|---|------------|------------|------------|---------------|
| I_R | $V_R = 10\text{V}$ (CDSH-2) | | | 5.0 | μA |
| I_R | $V_R = 30\text{V}$ (CDSH-4) | | | 5.0 | μA |
| BV_R | $I_R = 50\mu\text{A}$ (CDSH-2) | 20 | | | V |
| BV_R | $I_R = 50\mu\text{A}$ (CDSH-4) | 40 | | | V |
| V_F | $I_F = 1.0\text{mA}$ | | | 0.3 | V |
| V_F | $I_F = 20\text{mA}$ | | | 0.4 | V |
| V_F | $I_F = 200\text{mA}$ | | | 0.6 | V |
| t_{rr} | $I_F = I_R = 200\text{mA}$, Rec. to 20mA | | 5.0 | | ns |
| C_{ob} | $V_R = 0\text{V}$, $f = 1.0\text{MHz}$ | | 50 | | pF |