



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

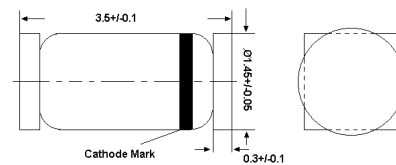
TEL: 852-2790 0314 FAX: 852-2790 0206

LS4148

Silicon Epitaxial Planar Switching Diode

Fast switching diode in QuadroMELF case
especially suited for automatic surface mounting.
Identical electrically to standard JEDEC 1N4148

LS-34

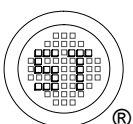


QuadroMELF
Dimensions in mm

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|---|-------------------------------|----------------------|------------------|
| Peak Reverse Voltage | V_{RM} | 100 | V |
| Reverse Voltage | V_R | 75 | V |
| Average Rectified Forward Current | $I_{F(AV)}$ | 200 | mA |
| Forward Current | I_F | 300 | mA |
| Repetitive Peak Forward Current | I_{FRM} | 500 | mA |
| Non-repetitive Peak Forward Surge Current | I_{FSM} | 0.5 | A |
| | | at $t = 1\text{ s}$ | |
| | | at $t = 1\text{ ms}$ | |
| | at $t = 1\text{ }\mu\text{s}$ | 4 | |
| Power Dissipation | P_{tot} | 500 ¹⁾ | mW |
| Junction Temperature | T_j | 175 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 65 to + 175 | $^\circ\text{C}$ |

¹⁾ Valid provided that electrodes are kept at ambient temperature.





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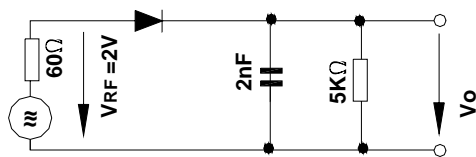
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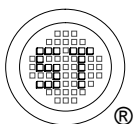
Characteristics at $T_a = 25^\circ\text{C}$

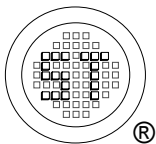
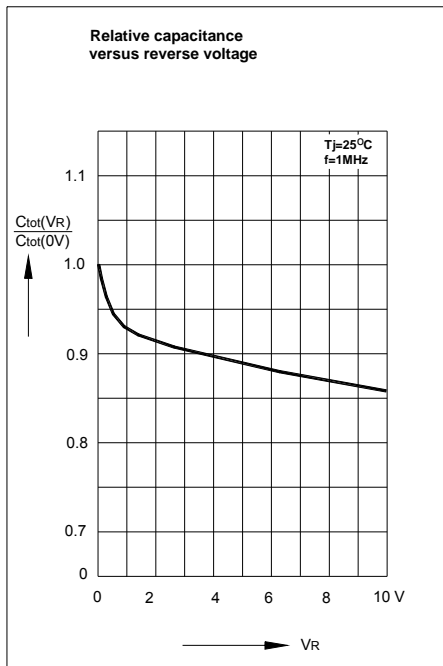
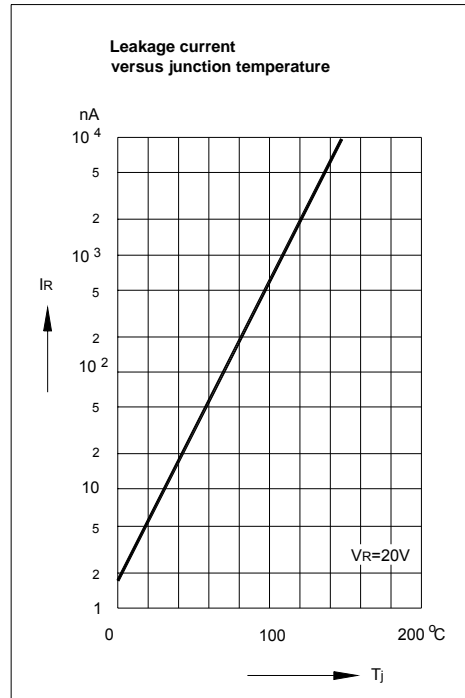
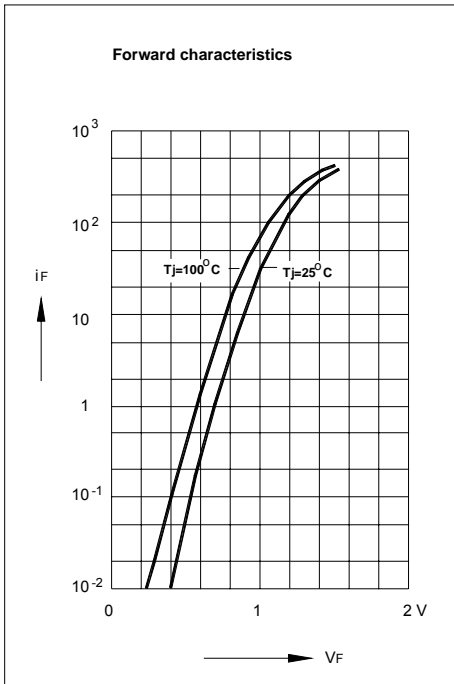
| Parameter | Symbol | Min. | Max. | Unit |
|---|-------------------------|-------------|---------------|--------------------------------------|
| Forward Voltage at $I_F = 10\text{ mA}$ | V_F | - | 1 | V |
| Reverse Leakage Current at $V_R = 20\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 20\text{ V}, T_J = 150^\circ\text{C}$ | I_R I_R I_R | - - - | 25 5 50 | nA μA μA |
| Reverse Breakdown Voltage tested with $100\ \mu\text{A}$ Pulses | $V_{(BR)R}$ | 100 | - | V |
| Capacitance at $V_R = 0, f = 1\text{ MHz}$ | C_{tot} | - | 4 | pF |
| Voltage Rise when Switching ON tested with 50 mA Forward Pulses $t_p = 0.1\text{ s}$, Rise Time $< 30\text{ ns}$, $f_p = 5\text{ to }100\text{ KHz}$ | V_{fr} | - | 2.5 | V |
| Reverse Recovery Time at $I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $V_R = 6\text{ V}$, $R_L = 100\ \Omega$ | t_{rr} | - | 4 | ns |
| Thermal Resistance Junction to Ambient Air | R_{thA} | - | $0.35^{(1)}$ | K/mW |
| Rectification Efficiency at $f = 100\text{ MHz}$, $V_{\text{RF}} = 2\text{ V}$ | η_v | 0.45 | - | - |

¹⁾ Valid provided that electrodes are kept at ambient temperature.

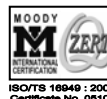


Rectification Efficiency Measurement Circuit





SEMTECH ELECTRONICS LTD.
 (Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
 Certificate No. 05103

ISO 14001:2004
 Certificate No. 7116

ISO 9001:2000
 Certificate No. 050059

BS-OHSAS 18001: 2007
 Certificate No. 7116

IECQ QC 080000
 Certificate No. 050059