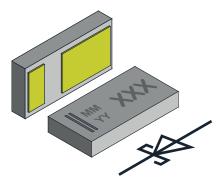
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Vishay Semiconductors

Schottky Rectifier Surface-Mount FlipKY[®] Gen 2



DESIGN SUPPORT TOOLS AVAILABLE



FEATURES

- Schottky diode for high-speed switching
- Very low dimensions 1.6 mm x 0.8 mm x 0.31 mm
- 2.0 A forward current
- Low forward voltage drop (typ. 510 mV at 2.0 A)
- Low reverse current (< 18 µA at 10 V)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912





| PARTS TABLE | | | | | | | | | |
|--------------|--------------------|--------------------------|-----------------|--------------|----------|--|------------------------------|--|--|
| PART | ORDERING CODE | CIRCUIT CONFIGURATION | PACKAGE NAME | TYPE CODE | WEIGHT | TAPED UNITS PER REEL (8 mm TAPE ON 7" REEL) | MINIMUM ORDER QUANTITY | | |
| VSKY20401608 | VSKY20401608-G4-08 | Single | CLP1608-2L | 104 | 0.840 mg | 5000 | 5000 | | |

| ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified) | | | | | | | |
|--|--|--------------------|-------|------|--|--|--|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT | | | |
| Maximum repetitive peak reverse voltage | | V _{RRM} | 40 | V | | | |
| Maximum average forward rectified current | $V_F = 0.5 V, R_{th} = 100 K/W$ | I _{F(AV)} | 2 | А | | | |
| Peak forward surge current | 8.3 ms single half sine-wave | I _{FSM} | 28 | А | | | |
| Power dissipation | On FR-4 board 50 mm x 50 mm 35 μm Cu single sided | P _{tot} | 1000 | mW | | | |

| THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified) | | | | | | | |
|--|--|-------------------|-------------|------|--|--|--|
| PARAMETER | TEST CONDITION SYMBO | | VALUE | UNIT | | | |
| Thermal resistance junction to ambient air | On FR-4 board 50 mm x 50 mm 35 μm Cu single sided | R _{thJA} | 100 | K/W | | | |
| Maximum operating junction temperature | | Тj | 125 | °C | | | |
| Storage temperature range | | T _{stg} | -65 to +150 | °C | | | |

| ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified) | | | | | | | | |
|---|--------------------------|----------------|-------|-------|------|--|--|--|
| PARAMETER | TEST CONDITION | SYMBOL | TYP. | MAX. | UNIT | | | |
| Leakage current | V _R = 10 V | I _R | | 18 | μA | | | |
| Leakage current | V _R = 40 V | I _R | | 150 | μA | | | |
| | I _F = 100 mA | V _F | 0.300 | 0.350 | V | | | |
| Forward voltage | I _F = 1 A | VF | 0.425 | 0.470 | V | | | |
| | I _F = 2 A | V _F | 0.510 | 0.580 | V | | | |
| Diode capacitance | $V_{R} = 0 V, f = 1 MHz$ | CD | 340 | | pF | | | |

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RATINGS AND CHARACTERISTICS CURVES ($T_A = 25^{\circ}C$ unless otherwise noted)

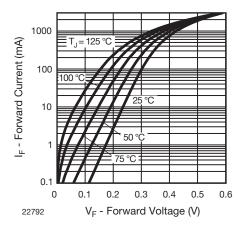


Fig. 1 - Typical Forward Current vs. Forward Voltage at Various Temperatures

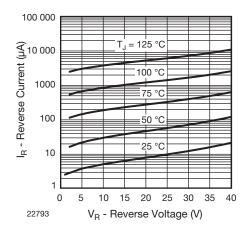


Fig. 2 - Typical Reverse Current vs. Reverse Voltage at Various Temperatures

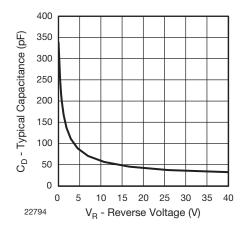


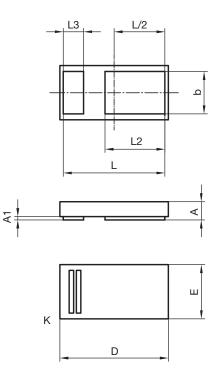
Fig. 3 - Typical Capacitance vs. Reverse Voltage

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PACKAGE DIMENSIONS in millimeters: CLP1608-2L



| | | А | A1 | b | D | Е | L | L2 | L3 |
|----|------|------|------|------|----------|----------|------|------|------|
| mm | min. | 0.25 | | 0.58 | 1.6 nom. | 0.8 nom. | 1.42 | 0.85 | 0.25 |
| | max. | 0.31 | 0.02 | 0.65 | | | 1.52 | 0.93 | 0.33 |

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Footprint and soldering recommendation:

please see Application Note: <u>www.vishay.com/doc?85917</u>



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