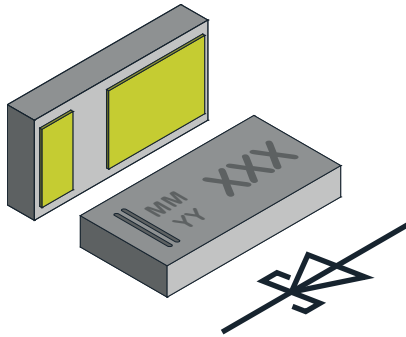


Schottky Rectifier Surface-Mount FlipKY® Gen 2



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. 500 mV at 2.0 A)
- Low reverse current (< 20 μ A at 10 V)
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

DESIGN SUPPORT TOOLS AVAILABLE



| 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 |
| VSKY20301608 | VSKY20301608-G4-08 | Single | CLP1608-2L | 103 | 0.840 mg | 5000 | 5000 |

| ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | |
|---|---|-------------|-------|------|--|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT | |
| Maximum repetitive peak reverse voltage | | V_{RRM} | 30 | V | |
| Maximum average forward rectified current | $V_F = 0.5\text{ V}$, $R_{th} = 100\text{ K/W}$ | $I_{F(AV)}$ | 2 | A | |
| Peak forward surge current | 8.3 ms single half sine-wave | I_{FSM} | 28 | A | |
| Power dissipation | On FR-4 board 50 mm x 50 mm 35 μ m Cu single sided | P_{tot} | 1000 | mW | |

| THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | |
|--|---|------------|-------------|--------------------|--|
| PARAMETER | TEST CONDITION | SYMBOL | VALUE | UNIT | |
| Thermal resistance junction to ambient air | On FR-4 board 50 mm x 50 mm 35 μ m Cu single sided | R_{thJA} | 100 | K/W | |
| Maximum operating junction temperature | | T_j | 125 | $^{\circ}\text{C}$ | |
| Storage temperature range | | T_{stg} | -65 to +150 | $^{\circ}\text{C}$ | |

| ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified) | | | | | | |
|---|---|--------|-------|-------|---------|--|
| PARAMETER | TEST CONDITION | SYMBOL | TYP. | MAX. | UNIT | |
| Leakage current | $V_R = 10\text{ V}$ | I_R | | 20 | μ A | |
| | $V_R = 30\text{ V}$ | I_R | | 150 | μ A | |
| Forward voltage | $I_F = 100\text{ mA}$ | V_F | 0.290 | 0.320 | V | |
| | $I_F = 1\text{ A}$ | V_F | 0.400 | 0.430 | V | |
| | $I_F = 2\text{ A}$ | V_F | 0.500 | 0.530 | V | |
| Diode capacitance | $V_R = 0\text{ V}$, $f = 1\text{ MHz}$ | C_D | 375 | | pF | |



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

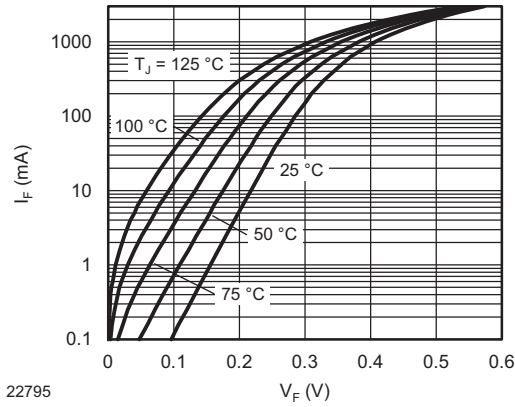


Fig. 1 - Typical Forward Current vs. Forward Voltage at Various Temperatures

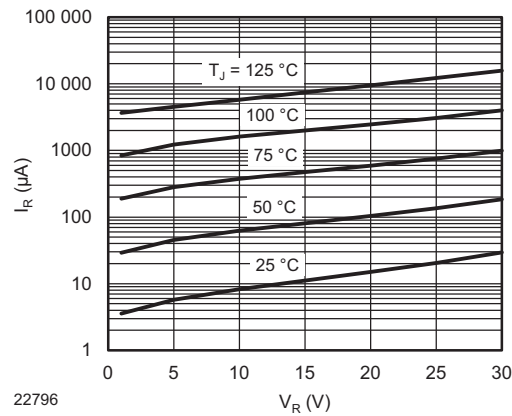


Fig. 2 - Typical Reverse Current vs. Reverse Voltage at Various Temperatures

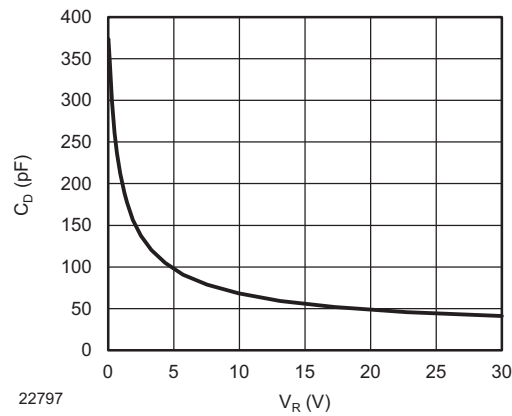
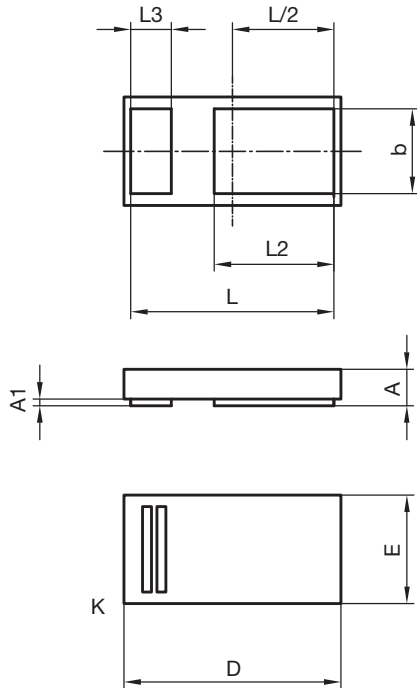


Fig. 3 - Typical Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters: **CLP1608-2L**


| | | A | A1 | b | D | E | 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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22739

Footprint and soldering recommendation:

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



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