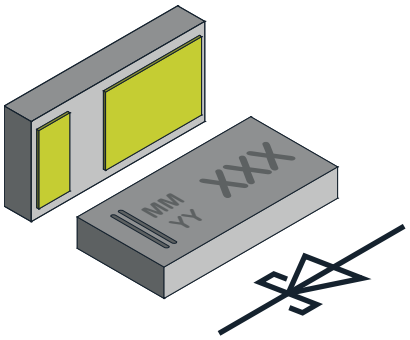
# Schottky Rectifier Surface Mount FlipKY® Gen 2




## 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. 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

Pb-free

e4

RoHS COMPLIANT

HALOGEN FREE

GREEN (5-2008)

## MECHANICAL DATA

**Case:** CLP1608-2L

**Int. construction:** single

**PARTS TABLE**

| PART | ORDERING CODE | INTERNAL CONSTRUCTION | PACKAGE NAME | TYPE CODE | WEIGHT | TAPED UNITS PER REEL (8 mm TAPE ON 7" REEL) | MINIMUM ORDER QUANTITY |
|---|---|---|---|---|---|---|---|
| VSKY20401608 | VSKY20401608-G4-08 | Single diode | 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 | 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 µm Cu single sided | $P_{tot}$ | 1000 | mW |

**THERMAL CHARACTERISTICS** ($T_{amb}$ = 25 °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 µm Cu single sided | $R_{thJA}$ | 100 | K/W |
| Maximum operating junction temperature | | $T_j$ | 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 |
| | $V_R$ = 40 V | $I_R$ | | 150 | µA |
| Forward voltage | $I_F$ = 100 mA | $V_F$ | 0.300 | 0.350 | V |
| | $I_F$ = 1 A | $V_F$ | 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 | $C_D$ | 340 | | pF |

**RATINGS AND CHARACTERISTICS CURVES** ($T_A$ = 25°C unless otherwise noted)

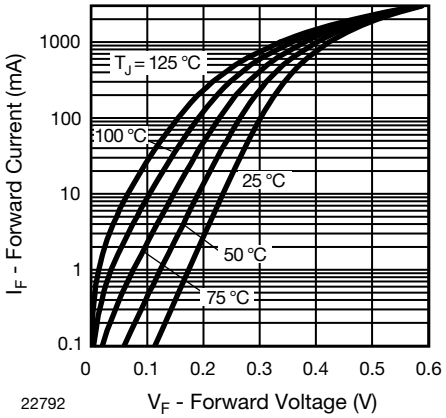



Fig. 1 - Typical Forward Current vs.
Forward Voltage at Various Temperatures

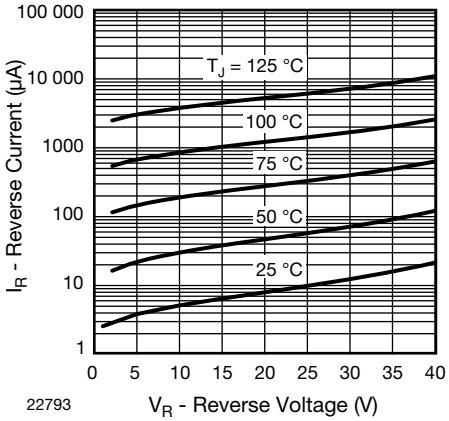



Fig. 2 - Typical Reverse Current vs.
Reverse Voltage at Various Temperatures

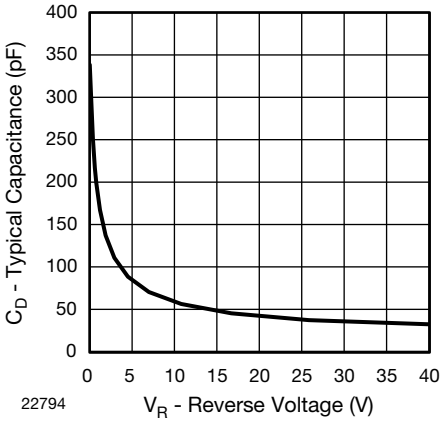
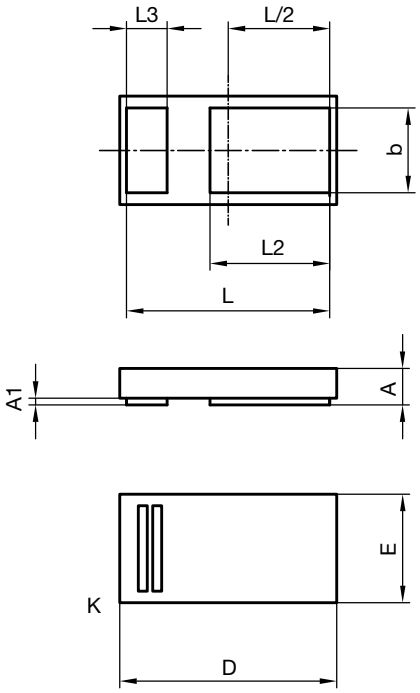



Fig. 3 - Typical Capacitance vs. Reverse Voltage

**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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**Footprint and soldering recommendation:**
please see Application Note: www.vishay.com/doc?85917

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