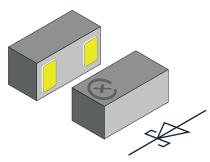


www.vishay.com

### Vishay Semiconductors

# Small Signal Schottky Diode FlipKY® Gen 2



**MARKING** (example only)



1 = year code Open circle = month code and pin 1 XY = type code

#### **LINKS TO ADDITIONAL RESOURCES**









#### **FEATURES**

- Schottky diode for high-speed switching
- Very low dimensions:0.6 mm x 0.3 mm x 0.29 mm
- 0.2 A forward current
- Low forward voltage drop (typ. 435 mV at 0.2 A)
- Low reverse current (< 3 µA at 10 V)
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912





ROHS COMPLIANT HALOGEN FREE

**GREEN** (5-2008)

| PARTS TABLE  |                    |                          |                 |                 |          |  |        |
|--------------|--------------------|--------------------------|-----------------|-----------------|----------|--|--------|
| PART         | ORDERING CODE      | CIRCUIT<br>CONFIGURATION | PACKAGE<br>NAME | TYPE<br>MARKING |          | TAPED UNITS PER REEL<br>(8 mm TAPE ON 7" REEL) |        |
| VSKY02300603 | VSKY02300603-G4-08 | Single                   | CLP0603-2M      | 23              | 0.115 mg | 15 000   | 15 000 |

| <b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified) |                       |                  |       |       |  |
|--|-----------------------|------------------|-------|-------|--|
| PARAMETER  | TEST CONDITION        | SYMBOL           | VALUE | UNIT  |  |
| Reverse voltage  |                       | $V_R$            | 30    | V     |  |
| Forward continuous current   |                       | I <sub>F</sub>   | 200   | mA    |  |
| Surge forward current  | 8.3 ms half sine-wave | I <sub>FSM</sub> | 6     | Α     |  |
| Power dissipation  | Footprint acc. Fig. 4 | D                | 278   | mW    |  |
| Power dissipation  | Infinite heat sink    | P <sub>tot</sub> | 1712  | 11100 |  |

| <b>THERMAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified) |   |                   |             |      |  |
|---|---|-------------------|-------------|------|--|
| PARAMETER   | TEST CONDITION                              | SYMBOL            | VALUE       | UNIT |  |
| Thermal resistance junction to ambient air  | Acc. JEDEC® 51-3 with footprint acc. Fig. 4 | R <sub>thJA</sub> | 450         | K/W  |  |
| Thermal resistance junction to soldering point  | Infinite heat sink                          | R <sub>thJS</sub> | 73          |      |  |
| Maximum operating junction temperature  |   | Tj                | 150         | °Ç   |  |
| Storage temperature range   |   | T <sub>stg</sub>  | -65 to +150 | )    |  |

| <b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified) |                         |                |      |      |      |
|--|-------------------------|----------------|------|------|------|
| PARAMETER  | TEST CONDITION          | SYMBOL         | TYP. | MAX. | UNIT |
| Leakage current  | V <sub>R</sub> = 10 V   | I <sub>R</sub> |      | 3    | μΑ   |
| Leakage current  | V <sub>R</sub> = 30 V   | I <sub>R</sub> |      | 10   |      |
|  | I <sub>F</sub> = 10 mA  | $V_{F}$        | 295  | 350  | mV   |
| Forward voltage  | I <sub>F</sub> = 100 mA | $V_{F}$        | 385  | 460  |      |
|  | I <sub>F</sub> = 200 mA | V <sub>F</sub> | 435  | 500  |      |
| Diode capacitance  | $V_R = 0 V, f = 1 MHz$  | C <sub>D</sub> | 33   |      | pF   |



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### RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)

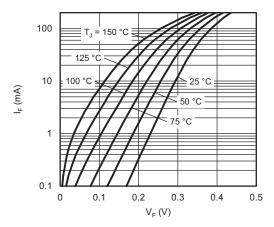


Fig. 1 - Typical Forward Current vs. Forward Voltage at Various Temperatures

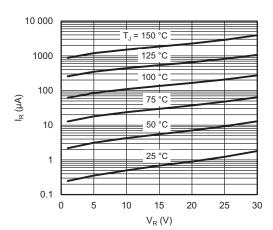


Fig. 2 - Typical Reverse Leakage Current vs. Reverse Voltage at Various Temperatures

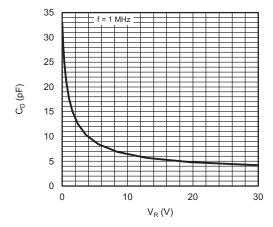


Fig. 3 - Typical Capacitance vs. Reverse Voltage

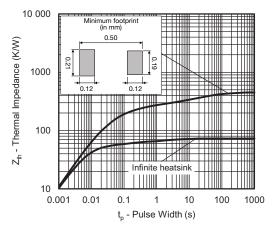
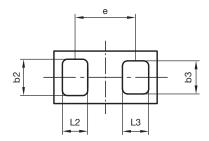


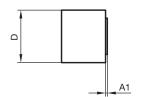
Fig. 4 - Typical Thermal Impedance vs. Time



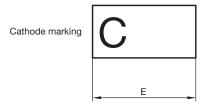
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### PACKAGE DIMENSIONS in millimeters: CLP0603-2M









|    | min. | max. |  |
|----|------|------|--|
| Α  | 0.25 | 0.29 |  |
| A1 | -    | 0.02 |  |
| b2 | 0.19 | 0.24 |  |
| b3 | 0.17 | 0.22 |  |
| D  | 0.29 | 0.33 |  |
| Е  | 0.59 | 0.63 |  |
| е  | 0.40 |      |  |
| L2 | 0.10 | 0.15 |  |
| L3 | 0.10 | 0.15 |  |

Document no.: S8-V-3906.04-038 (4) Rev.3 - Date: 15. Feb. 2017

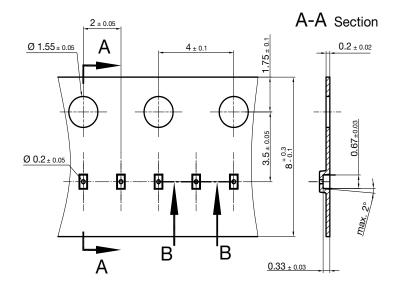
22825

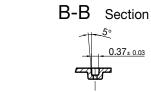
### Footprint and soldering recommendation:

please see Application Note: <a href="https://www.vishay.com/doc?85917">www.vishay.com/doc?85917</a>

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### **CARRIER TAPE** in millimeters: **CLP0603**

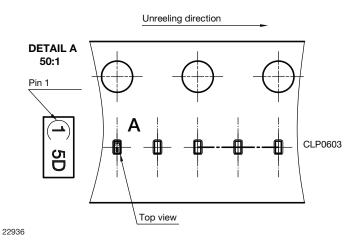




Cummulative tolerances of 10 sprocket holes is +/-0.2 mm

22591 Document no. S8-V-3906.04-0025 (4) Created - Date: 22. Nov. 2010

#### **ORIENTATION IN CARRIER CLP0603**



Orientation in Carrier Tape (CLP0603) S8-V-3906.04-026 (4) 22.10.2010



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