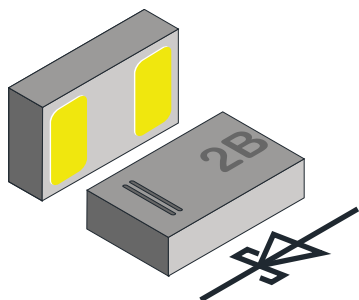


Schottky Rectifier Surface-Mount FlipKY® Gen 3



LINKS TO ADDITIONAL RESOURCES



FEATURES

- Schottky diode for high-speed switching
- Very low dimensions:
1.0 mm x 0.6 mm x 0.29 mm
- 0.5 A forward current
- 20 V reverse voltage
- Low forward voltage drop (typ. 400 mV at 500 mA)
- Low reverse current (<15 µA at 10 V)
- AEC-Q101 qualified available
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912



PRIMARY CHARACTERISTICS	
I_F	500 mA
V_R	20 V
V_F at $I_F = 500$ mA	400 mV
I_{FSM} ($t_p = 8.3$ ms)	12 A
T_J max.	150 °C
Package	CLP1006-2L
Circuit configuration	Single

PARTS TABLE								
PART	GRADE	ORDERING CODE	CIRCUIT CONFIGURATION	PACKAGE NAME	TYPE MARKING	WEIGHT	TAPED UNITS PER REEL (8 mm TAPE ON 7" REEL)	MINIMUM ORDER QUANTITY
VSKY0520A6	Industrial	VSKY0520A6-G4-08	Single	CLP1006-2L	2B	0.4 mg	10 000	10 000
VSKY0520A6	AEC-Q101	VSKY0520A6HG4-08	Single	CLP1006-2L	2B	0.4 mg	10 000	10 000

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25$ °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V_R	20	V
Forward continuous current		I_F	500	mA
Surge forward current	Single pulse; 8.3 ms half sine-wave	I_{FSM}	12	A
Power dissipation	Minimal footprint	P_{tot}	1350	mW

THERMAL CHARACTERISTICS ($T_{amb} = 25$ °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	Acc. JEDEC® 51-3 with minimal footprint on FR4 PCB	R_{thJA}	280	K/W
Thermal resistance junction to soldering point	Acc. JEDEC® JESD51-14	R_{thJS}	12	K/W
Maximum operating junction temperature		T_J max.	150	°C
Storage temperature range		T_{stg}	-65 to + 150	°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	-	15	μA
Leakage current	$V_R = 20\text{ V}$	I_R	-	30	μA
Forward voltage	$I_F = 10\text{ mA}$	V_F	260	295	mV
Forward voltage	$I_F = 100\text{ mA}$	V_F	335	367	mV
Forward voltage	$I_F = 500\text{ mA}$	V_F	400	448	mV
Diode capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_D	150	-	pF

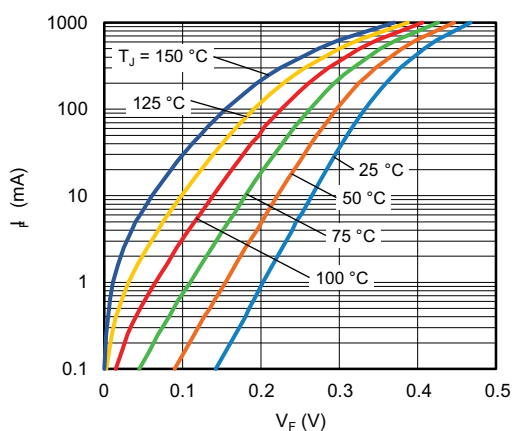
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)


Fig. 1 - Typical Forward Current vs. Forward Voltage

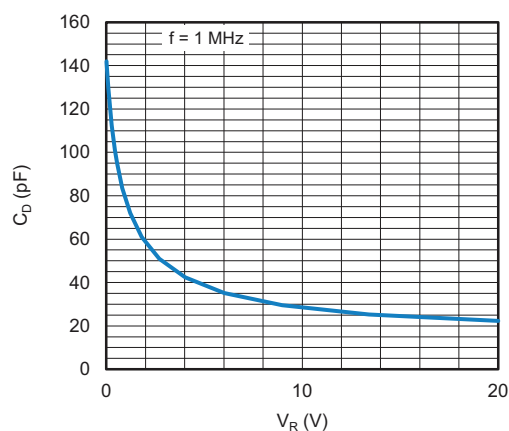


Fig. 3 - Typical Capacitance vs. Reverse Voltage

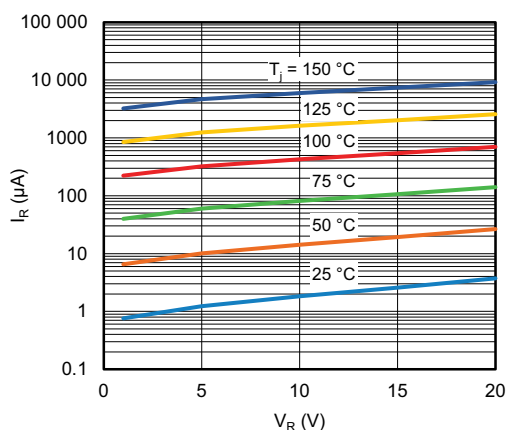


Fig. 2 - Typical Reverse Leakage Current vs. Reverse Voltage

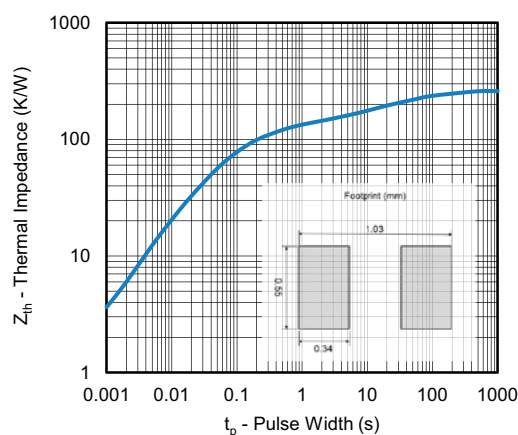
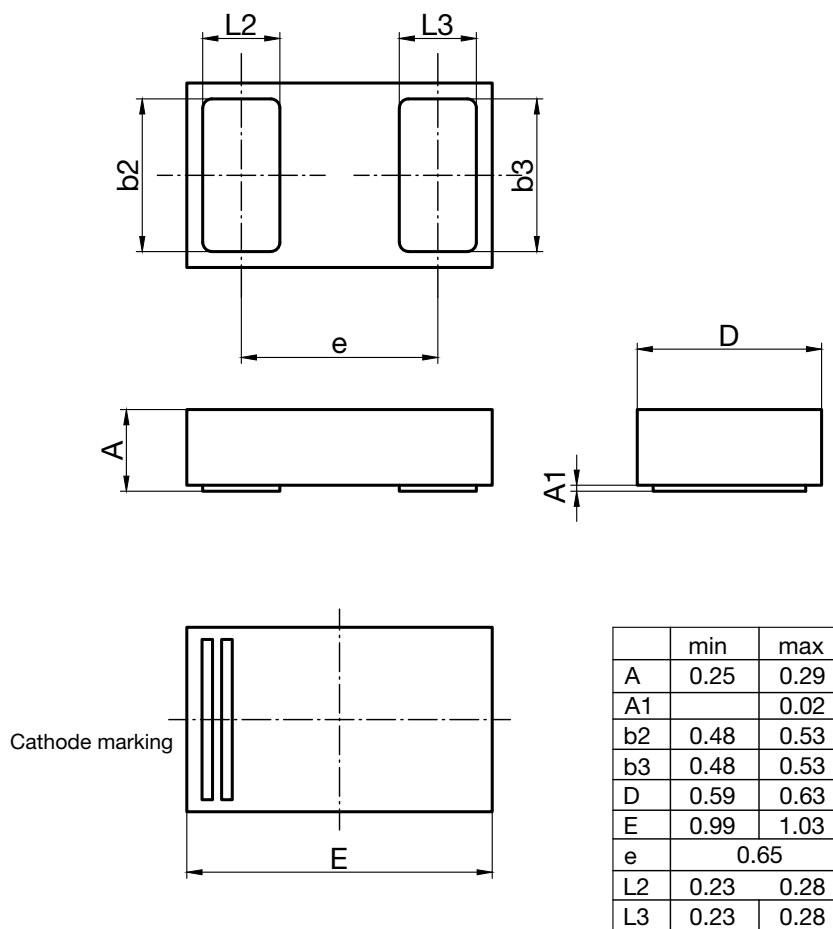


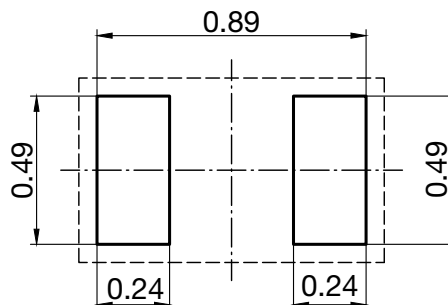
Fig. 4 - Typical Thermal Impedance vs. Time

PACKAGE DIMENSIONS in millimeters: **CLP1006-2L**

Package = Chip Dimensions in mm



foot print recommendation:

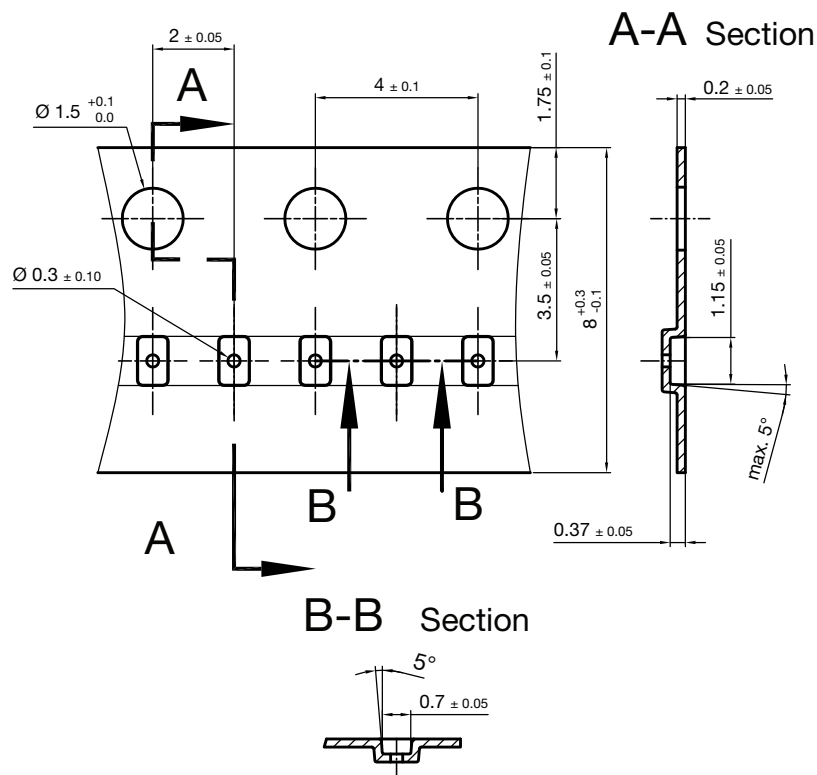

Marking side chipping

Marking side chipping depth is controlled to be less than 100 μm under normal manufacturing conditions. This parameter is monitored as part of process control and is not subject to 100% inspection. It does not affect product electrical performance or reliability.

Document no.:S8-V-3906.04-039 (4)
Created - Date: 02. April 2015
Rev.2 - Date: 19. Dec. 2023
23229

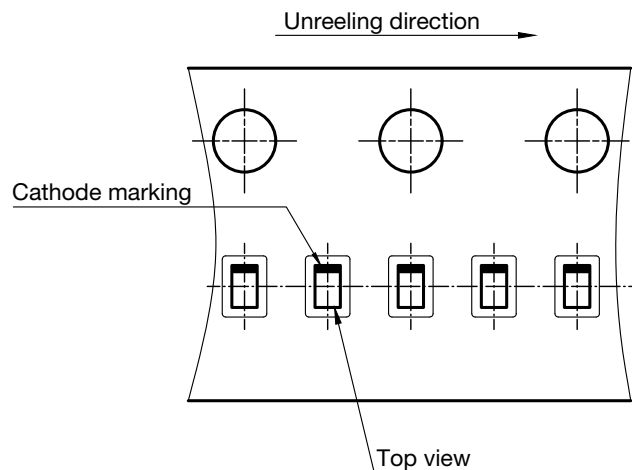
Footprint and soldering recommendation:

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

CARRIER TAPE in millimeters: **CLP1006-2L**

Cumulative tolerances of 10 sprocket holes is ± 0.2 mm

Carrier tape CLP1006-2L
S8-V-3906.04-051 (4)
03.02.2016
22937

ORIENTATION IN CARRIER CLP1006-2L



Orientation in Carrier CLP1006-2L (VSKY)
S8-V-3906.04-052 (4)
23.12.2023
22938



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