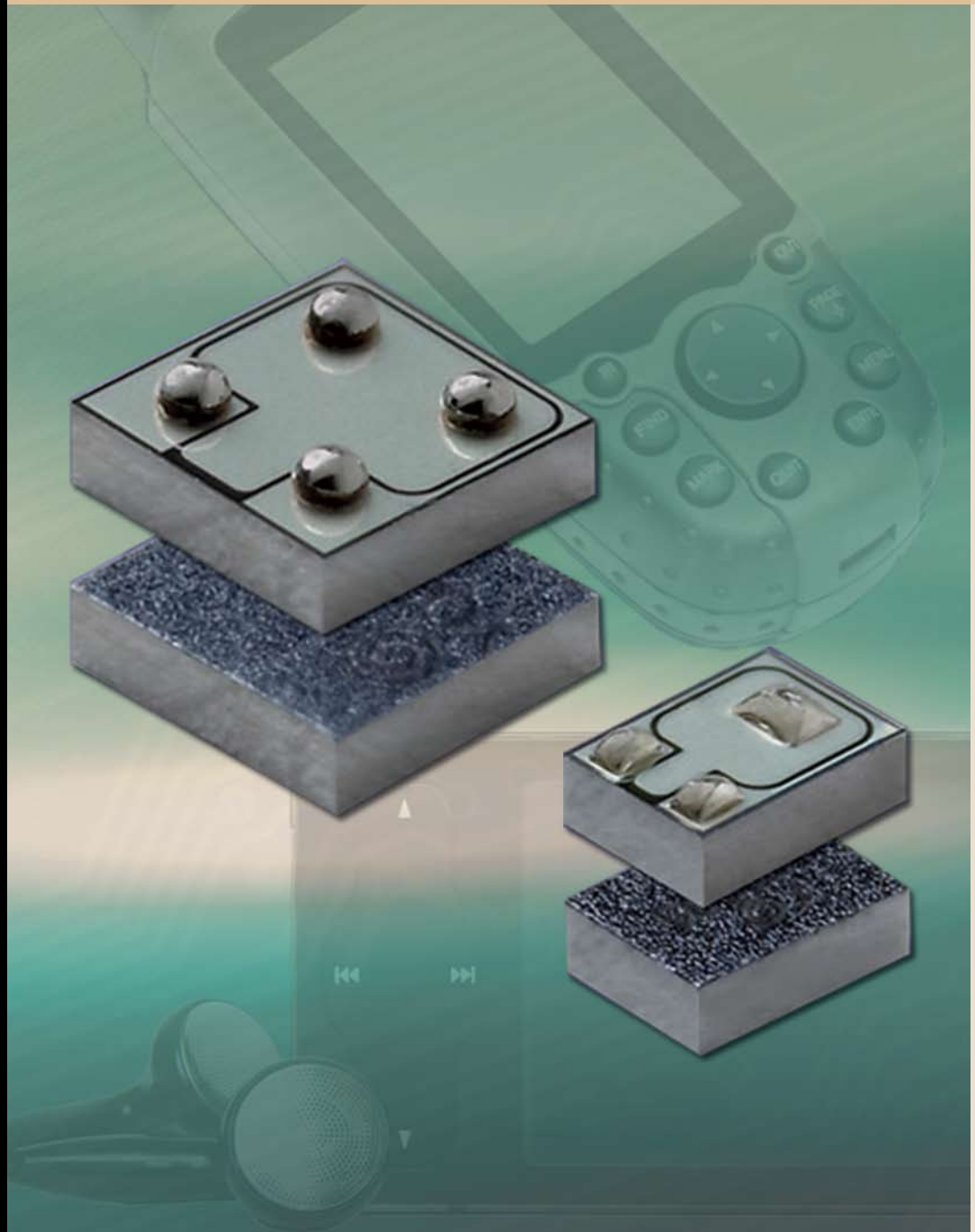




VISHAY INTERTECHNOLOGY, INC.

FlipKY[®]

Industry-First Chip Scale Schottky Diodes



HIGH POWER PRODUCTS

PRODUCT OVERVIEW



Introduction

FlipKY® Schottky diodes offer a wafer-level, chip scale format to save space in a wide variety of power management applications.

The anode and cathode connections are made through solder bump pads on one side of the silicon, enabling designers to strategically place the diodes on the PC board. This flip chip design not only minimizes board space but also reduces thermal resistance and inductance, allowing the virtual elimination of all package parasitics for improved overall circuit efficiency.

Their advanced physical design allows FlipKY products to offer industry-leading specifications in a significantly smaller footprint compared to standard packages.

FlipKY Features and Benefits

- FlipKY wafer-level, chip scale format minimizes board space and reduces thermal resistance and inductance
- Virtual elimination of all package parasitics for improved overall circuit efficiency
- Fully compatible with other surface-mount devices
- Footprint of 0.5-A and 0.75-A diodes is one-tenth the size of the SMA footprint
- Footprint of 1.0-A and 1.5-A diodes is one-fifth the size of the SMA footprint
- Ultra-low forward voltage per footprint area
- Choose either low forward voltage to optimize conduction losses or low reverse leakage to optimize reverse power losses
- Industry's smallest footprints of 0.9 mm by 1.2 mm and 1.5 mm by 1.5 mm
- Ultra-low profile: 0.6 mm for 1-A and 1.5-A devices, 0.5 mm for 0.5-A and 0.75-A devices
- Improved working temperature, with full operation at 150 °C
- Supplied in tape and reel format and can be mounted using standard SMD techniques
- Available with lead (Pb)-free or eutectic solder bumps

FlipKY Applications

A small footprint and very low height profile make FlipKY Schottky diodes the ideal choice for battery protection, freewheeling diode, boost diode, and current sensing applications in slim and space-sensitive portable electronics, including:

- Bluetooth® accessories
- PDAs
- MP3 players
- Digital cameras
- Personal video players
- Mobile phones
- GSM boards, GPS systems
- Other portable electronic systems

For technical support, contact:
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For further information:
<http://www.vishay.com/ref/flipky/>



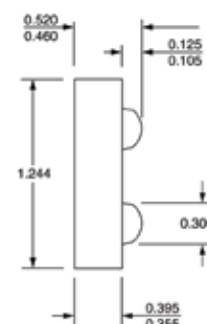
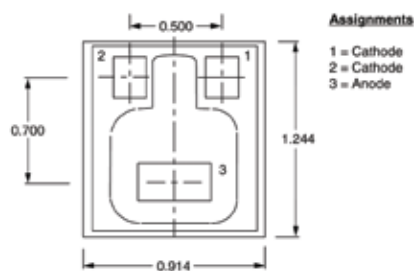
PARTS TABLE										
Device Number	I _F (A)	V _R (V)	V _F @ I _F		I _R @ V _R		Format	Area (mm ²)	R _{th(jc)} (°C/W)	R _{th(j-a)} (°C/W)
			@ 25 °C Typ. (V)	@ 125 °C Max. (V)	@ 25 °C Max. (μA)	@ 125 °C Typ. (mA)				
FCSP0530TR *	0.5	30	0.40	0.33	50	5	3 bump	1.1	35	150
FCSP05H40TR *	0.5	40	0.48	0.42	10	0.5	3 bump	1.1	35	150
FCSP0730TR*	0.75	30	0.47	0.37	50	5	3 bump	1.1	35	150
FCSP07H40TR*	0.75	30	0.55	0.47	10	0.7	3 bump	1.1	35	150
FCSP130LTR **	1.0	30	0.41	0.33	100	10	4 ball	2.3	40	62
FCSP140LTR **	1.0	40	0.43	0.38	80	9	4 ball	2.3	40	62
FCSP1H40LTR **	1.0	40	0.48	0.42	15	2.5	4 ball	2.3	40	62
FCSP230LTR **	1.5	30	0.44	0.37	100	30	4 ball	2.3	40	62
FCSP240LTR **	1.5	40	0.45	0.42	80	9	4 ball	2.3	40	62
FCSP2H40LTR **	1.5	40	0.52	0.47	15	2.5	4 ball	2.3	40	62

* R_{th(j-a)} tested with minimum footprint PC board

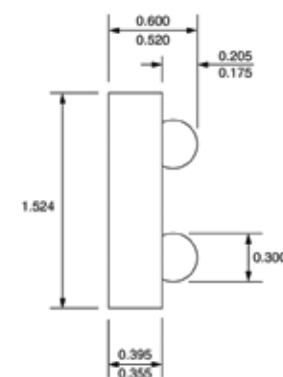
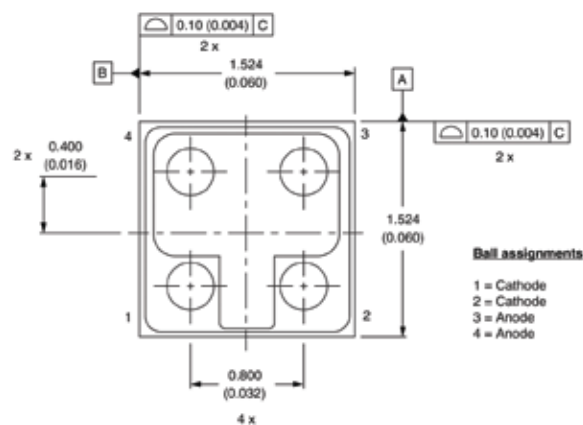
** R_{th(j-a)} tested on 1-in. square PC board

Package Dimensions (in mm)

0.5-A and 0.75-A Devices



1-A and 1.5-A Devices



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• FETs • Optoelectronics • ICs • Modules

PASSIVE COMPONENTS:

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