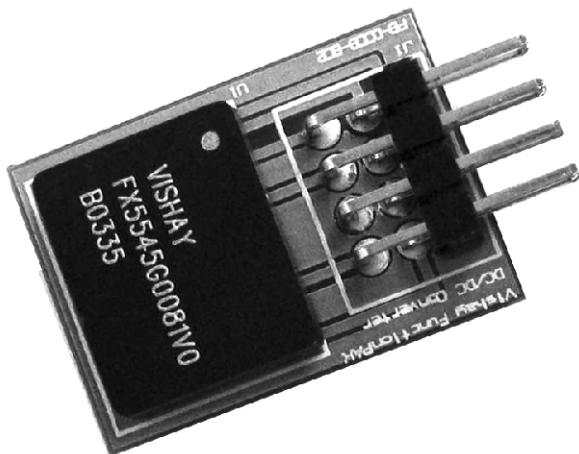


**Fully Integrated DC/DC Converter 0.9V to 6V, 4A with
570W/in³ Power Density, Efficiency up to 95%.
Simplified Lab assembly configuration for all models**



The DC/DC converter is a programmable topology synchronized Buck or Boost converter for today's continuous changing electronic market. The DC/DC converter provides flexibility of utilizing various battery configurations and chemistries such as NiCd, NiMH, or Li+ with input voltage range of 2.5V to 6V. An additional flexibility is provided with topology programmability to power multiple loads such as power amplifiers, microcontrollers, or baseband logic IC's. For ultra-high efficiency, converters are designed to operate in synchronous rectified PWM mode under full load while transforming into externally controlled pulse-skipping mode (PSM) under light load.

The DC/DC converter is available in 20-ports BGA package for production. Convenient 8-pin plug-in modules are available for prototyping. In order to satisfy the stringent ambient temperature requirements, the DC/DC converter is designed to handle the industrial temperature range of -40°C to +85°C, with no cooling or derating.

FEATURES

- Specially designed for prototyping in Labs with limited assembly equipment.
- Fully integrated DC/DC converter
- No external components required
- Buck or Boost configurations
- High efficiency over large load range
- 100% duty cycle
- Power density - more than 570W/inch³
- 1µA shutdown current
- 2.5V to 6V input range (1Li+ and 3-cell NiCd or NiMH cells)
- 0.9V to 6V output voltage
- Programmable PWM/PSM controls
- Low output ripple
- Standard socket construction or plug-in for prototype (use BGA for production)
- Temperature range: -40°C to +85°C
- Output power 15W
- Maximum continuous current 4A

APPLICATION

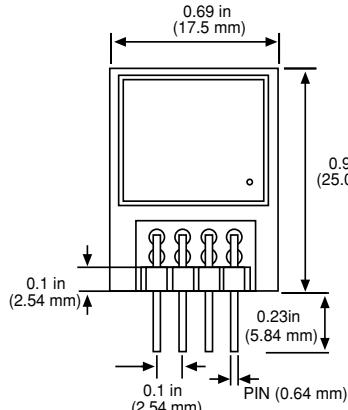
- Point of Load (POL) applications such as drivers for FPGA's, microprocessors, DSP's, amplifiers, etc.
- Cordless phones, PDAs and others
- Supply voltage source for low-voltage chip sets
- Portable computers
- Battery back-up supplies
- Cameras

ORDERING INFORMATION

FUNCTION	FX	5545	G <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	PI*
SIZE					
CIRCUIT IDENTIFIER					
OUTPUT VOLTAGE-Example: 2.7V should be written as 2V7 as the V indicates the decimal point, or ADJ for adjustable version - self selectable output voltage.					
PLUG-IN VERSION					

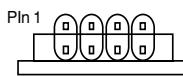
*PI is the abbreviation of Plug-In. When ordering please use an upper case i, not a lower case L.

PIN DESCRIPTION AND RECOMMENDED BOARD LAYOUT

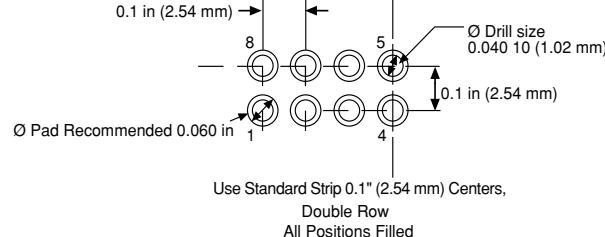


PIN No:	Description
1	Vout
2	GND
3	Vin
4	PWM
5	SD
6	SYNC
7	GND
8	Rext

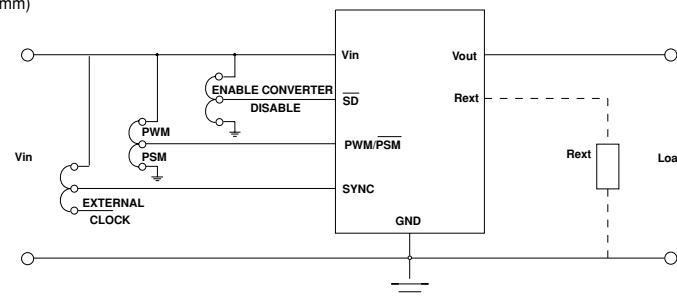
View from bottom side



RECOMMENDED BOARD LAYOUT



Ø Pad Recommended 0.060 in
Use Standard Strip 0.1" (2.54 mm) Centers,
Double Row
All Positions Filled



PIN	DESCRIPTION
SD	Logic low on SD pin shuts down the FunctionPAK completely and decreases current consumption to less than 1 μ A.
PWM/PSM	Logic high =PWM mode, logic low =PSM mode. In PSM mode synchronous rectification is disabled.
SYNC	Externally controlled synchronization signal. Logic high to low transition forces the clock synchronization. If not used the pin must be connected to Vin or logic high.
Vin	Input supply voltage
Vout	Output voltage
GND	Ground
Rext.	Included inside the package for all fixed output voltage converters. To be added externally for all self-selected output voltages.

DESIGN REFERENCE GUIDE - for details see www.vishay.com/integrated-modules/

MODEL	CIRCUIT IDENTIFIER	TYPE	DESCRIPTION	INPUT VOLTS	OUTPUT VOLTS @ AMPS
FX5545G001XVXPI	G001	BUCK	1.5W, 0.6A	2.5 – 6.0	1.35 - 4.5* @ 0.6 max
FX5545G201XVXPI	G201		3W, 1.0A	2.5 – 6.0	1.35 - 4.5* @ 1.0 max
FX5545G018XVXPI	G018		3.6W, 3.0A	2.5 – 6.0	0.9 - 1.3 @ 3.0 max
FX5545G005XVXPI	G005		5W, 1.5A	2.5 – 6.0	1.35 - 4.5* @ 1.5 max
FX5545G105XVXPI	G105		6.5W, 2.0A	2.5 – 6.0	1.35 - 4.5* @ 2.0 max
FX5545G205XVXPI	G205		8W, 2.5A	2.5 – 6.0	1.35 - 4.5* @ 2.5 max
FX5545G008XVXPI**	G008		10W, 3.0A	2.5 – 6.0	0.9 - 4.5* @ 3.0 max
FX5545G305XVXPI	G305		10W, 3.0A	2.5 – 6.0	1.35 - 4.5* @ 3.0 max
FX5545G108XVXPI**	G108		15W, 4.0A	2.5 – 6.0	0.9 - 4.5* @ 4.0 max
FX5545G002XVXPI	G002	BOOST	1.5W, 0.3A	2.5 – 6.0	3.3 - 6.0 @ 0.3 max
FX5545G202XVXPI	G202		3W, 0.6A	2.5 – 6.0	3.3 - 6.0 @ 0.6 max
FX5545G402XVXPI	G402		5W, 1.0A	2.5 – 6.0	3.3 - 6.0 @ 1.0 max
FX5545G006XVXPI	G006		9W, 1.5A	2.5 – 6.0	3.3 - 6.0 @ 1.5 max
FX5545G106XVXPI	G106		12W, 2.0A	2.5 – 6.0	3.3 - 6.0 @ 2.0 max
FX5545G206XVXPI	G206		15W, 2.5A	2.5 – 6.0	3.3 - 6.0 @ 2.5 max

*Note: For higher output voltage please consult factory at FunctionPAK@Vishay.com

**Note: FX5545G008ADJPI and FX5545G108ADJPI are available only at 1.35V - 4.5V output voltage

Disclaimer

All product specifications and data are subject to change without notice.

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Vishay:

FX5545G0051V5PI	FX5545G305ADJPI	FX5545G105ADJPI	FX5545G0081V8PI	FX5545G005ADJPI
FX5545G205ADJPI	FX5545G0082V5PI	FX5545G1082V5PI	FX5545G201ADJPI	FX5545G001ADJPI
FX5545G0013V3PI	FX5545G2013V3PI	FX5545G2012V7PI	FX5545G0012V7PI	FX5545G1080V9PI
FX5545G202ADJPI	FX5545G402ADJPI	FX5545G0065V0PI	FX5545G1065V0PI	FX5545G002ADJPI
FX5545G0013V6PI	FX5545G2013V6PI	FX5545G2012V0PI	FX5545G0012V0PI	FX5545G1051V5PI
FX5545G2051V5PI	FX5545G3051V5PI	FX5545G0080V9PI	FX5545G1081V8PI	FX5545G2012V5PI
FX5545G4023V3PI	FX5545G0023V3PI	FX5545G2023V3PI	FX5545G1082V7PI	FX5545G0082V7PI
FX5545G3052V0PI	FX5545G1052V0PI	FX5545G2052V0PI	FX5545G0052V0PI	FX5545G206ADJPI
FX5545G006ADJPI	FX5545G106ADJPI	FX5545G0081V4PI	FX5545G1081V4PI	FX5545G0082V0PI
FX5545G1082V0PI	FX5545G2025V0PI	FX5545G4025V0PI	FX5545G0025V0PI	FX5545G0011V5PI
FX5545G2011V5PI	FX5545G2011V8PI	FX5545G0011V8PI	FX5545G1052V7PI	FX5545G3052V7PI
FX5545G2052V7PI	FX5545G0063V3PI	FX5545G1063V3PI	FX5545G3053V6PI	FX5545G0053V6PI
FX5545G1053V6PI	FX5545G2053V6PI	FX5545G0052V7PI	FX5545G1081V2PI	FX5545G0081V2PI
FX5545G1083V6PI	FX5545G0080V8PI	FX5545G0083V6PI	FX5545G0053V3PI	FX5545G1053V3PI
FX5545G3053V3PI	FX5545G2053V3PI	FX5545G0081V0PI	FX5545G1081V0PI	FX5545G1081V5PI
FX5545G0081V5PI	FX5545G1052V5PI	FX5545G2052V5PI	FX5545G3052V5PI	FX5545G0052V5PI
FX5545G2051V8PI	FX5545G3051V8PI	FX5545G0051V8PI	FX5545G1051V8PI	FX5545G0012V5PI
FX5545G1083V3PI	FX5545G0083V3PI	FX5545G008ADJPI	FX5545G018ADJPI	FX5545G108ADJPI
FX5545G2065V0PI	FX5545G2063V3PI			