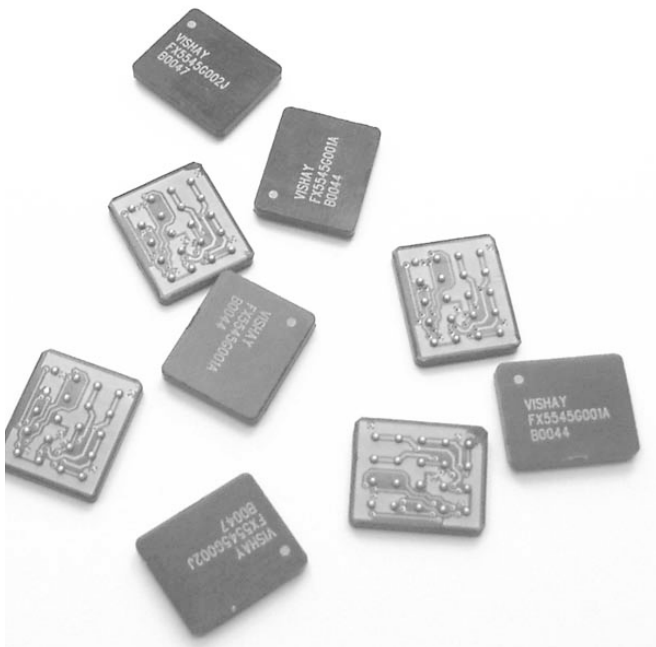


Industry Smallest and Low Profile 5W 1.5A DC/DC Buck Converter with High Output Density Power



FEATURES

- Fully integrated DC/DC converter
- High efficiency over large load range
- 100% duty cycle
- Power density - more than 100W/inch³
- 1uA shutdown current
- 2.7V to 6V input range (1Li+ and 3-cell NiCd or NiMH cells)
- 1.8V to 3.3V output voltage
- Programmable PWM/PSM controls
- Low output ripple
- BGA/LGA construction
- Temperature range: - 40°C to + 85°C
- No external components needed
- Output power 5W
- Maximum current 1.5A
- Low profile

The DC/DC converter is a programmable topology synchronized Buck converter for today's continuous changing portable electronic market. The DC/DC converter provides flexibility of utilizing various battery configurations and chemistries such as NiCd, NiMH, or Li+ with an input voltage range of 2.7V 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. 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.

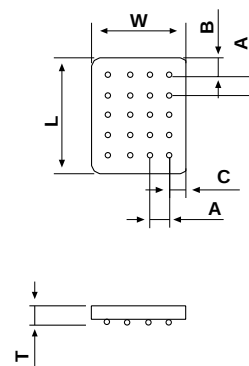
APPLICATION

- Cordless phones, PDAs and others
- Supply voltage source for low-voltage chip sets
- Portable computers
- Battery back-up supplies
- Cameras

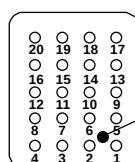
ORDERING INFORMATION

	FX	5545	G005	☐ ☐ ☐
FUNCTION				
SIZE				
SERIAL NUMBER				
OUTPUT VOLTAGE-Example: 2.7V should be written as 2V7 as the V indicates the decimal point.				

DIMENSIONS in inches [millimeters]	
L	0.58 ± 0.01 [14.7 $\pm$ 0.25]
W	0.48 ± 0.01 [12.2 $\pm$ 0.25]
A	0.1 ± 0.01 [2.54 $\pm$ 0.25]
B	0.09 ± 0.01 [2.29 $\pm$ 0.25]
C	0.09 ± 0.01 [2.27 $\pm$ 0.25]
T	0.12 max [3 max]



BOTTOM SIDE

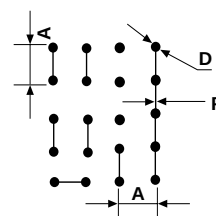


Marked on Upper Side

PIN CONFIGURATION

PIN	CONNECTION
1, 2	$\overline{SD}$
3, 7	SYNC
4, 8	N/C
5, 9	Vin
6, 10	PWM/ $\overline{PSM}$
11, 12	N/C
13, 17	GND
14, 18	Vout
15, 19	N/C
16, 20	GND

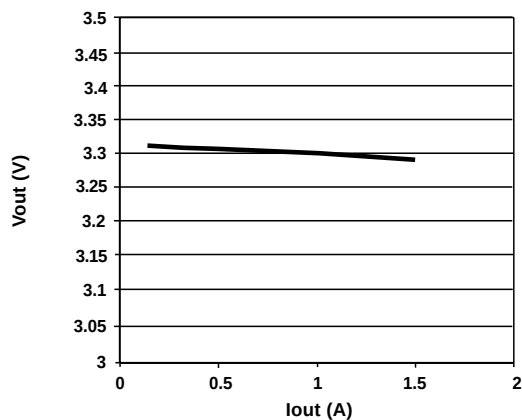
RECOMMENDED PAD PATTERN in inches [millimeters]		
A	D	F
0.1 ± 0.01 [2.54 $\pm$ 0.25]	0.03 ± 0.001 [0.8 $\pm$ 0.02]	0.02 ± 0.001 [0.5 $\pm$ 0.02]



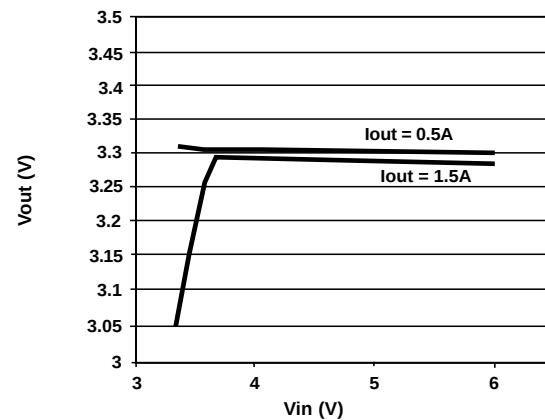
**STANDARD ELECTRICAL SPECIFICATIONS**

PARAMETER	UNIT	CONDITION	MIN	TYP	MAX
Input Voltage Range	V_{DC}		2.7		6
Insulation Test Voltage Resistance Leakage Current	V_{AC} Ω nA	60Hz 60sec $V_{ISO} = 500V_{DC}$ $V_{ISO} = 500V_{DC}$	750 1×10^{11}		5
Output Power Voltage Temp. Coefficient Ripple and Noise	W V_{DC} %/°C mVpp	DC to 20MHz		5 1.8 to 3.3 100	0.03
General Package Weight	gr.				1.5
Temperature Operation Storage	°C °C		- 40 - 55		+ 85 + 125

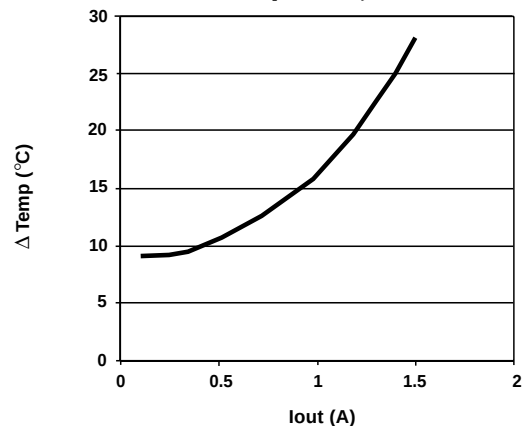
Vout Vs. Iout
Vin = 3.6V



Vout Vs. Vin



Δ Temp. Vs. Iout
Above 25°C Ambient Temperature; For Vout = 3.3V; Vin = 6V



Efficiency Vs. Iout
Vout = 3.3V; Vin = 3.6V

