

DC-DC Converter Modules DC-DCコンバータ モジュール

FMK•FN Series (Non-floating Type) / E•FI Series (Floating Type)



**FMK Series**

Power: F: 0.25, M: 0.5, K: 1.0W

**Features**

Optimum regulation (line/load). Highly reliable epoxy moulding.

**特長**

- 独自の回路方式と独自の生産技術
- 高品質、高信頼性の産業用



**E Series**

Power: 1.5W

**Features**

Complete primary and secondary floating. Built-in filters, reduced ripple and spike noise.

**特長**

- 入力側と出力側を完全にフローティング（絶縁）
- 入出力側にフィルタを内蔵
- リップル、スパイクノイズが低い



**FN/FI Series**

Power: 1.5, 3.0W

**Features**

Wide 3V/5V input voltage ranges Low-profile: 8mm

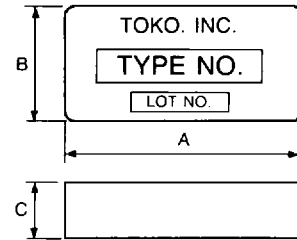
**特長**

- ワイド入力：DC3V/5V入力対応
- 薄 形：厚さ8mm

**Electrical Characteristics**

Item Type	Input Voltage	Output Power	Output Voltage	Dimensions (mm)			
				Power	A	B	C
FMK (Non-floating)	+5V ±10%	0.25W	+6, +9, +12, +15, +20, +24V -5, -6, -9, -12, -15, -20V	0.25W	35	17	8
		0.5W		0.5W	32.5	17	10
		1.0W	±6, ±9, ±12, ±15, ±20V	1.0W	32.5	17	12
E (Floating)	5V ±10% 12, 24V ±20%	1.5W	5, 12, 15, 24V ±12, ±15V	1.5W	45.1	30.1	16.8
FN (Non-floating)	2.7 ~ 7V (2.7 ~ 4V)	1.5W	+5, +12, +15V -5, -12, -15V	1.5W	36	23	8
		3.0W	±12, ±15V	3.0W	40	25	8
FI (Floating)	2.7 ~ 7V	1.5W	5, 12, 15V ±12, ±15V	1.5W	40	25	8
		3.0W		3.0W	43	31	8

**Dimensions**  
(Unit: mm)



**CFD Series**



**Features**

- Miniature size
- Surface mounting type
- High power density
- High efficiency
- Small tolerance of output voltage
- Parallel operation is available
- ON/OFF control is available for output voltage
- High reliability

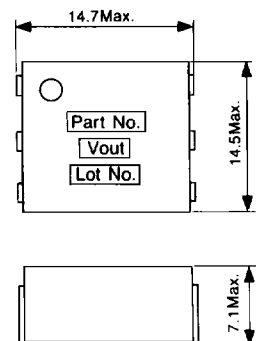
**特長**

- 超小形
- 面実装
- 高電力密度
- 高変換効率
- 高精度出力電圧
- 並列運転可
- ON/OFFコントロール付
- 高信頼性

**Electrical Characteristics**

Part No. *1	Input Voltage Range	Output Voltage	Output Current Range	Output Power	Conversion Efficiency
FDD1106M/S	5V ~ 12V	ch. 1 3.3V ±3%	120mA ~ 600mA	2W	84% Typ.
FDD1206M/S	6V ~ 17V	ch. 1 3.3V ±3%	120mA ~ 600mA	2W	82% Typ.
FDD1203M/S	6V ~ 17V	ch. 1 5V ±3%	120mA ~ 600mA	3W	87% Typ.
FDB1001M/S	4.5V ~ 5.5V	ch. 1 12V ±3%	45mA ~ 115mA	1.4W	70% Typ.
FDB1002M/S	4.5V ~ 5.5V	ch. 1 15V ±3%	40mA ~ 90 mA	1.4W	70% Typ.
FDB2001M/S	4.5V ~ 5.5V	ch. 1 12V ±3%	22.5mA ~ 57.5mA	1.4W	72% Typ.
		ch. 2 -12V ±6%	22.5mA ~ 57.5mA		
FDB2002M/S	4.5V ~ 5.5V	ch. 1 15V ±3%	20mA ~ 45mA	1.4W	72% Typ.
		ch. 2 -15V ±6%	20mA ~ 45mA		
FDF1103M/S	5V ~ 12V	ch. 1 5V ±3%	100mA ~ 250mA	1.3W	77% Typ.
FDF1105M/S	5V ~ 12V	ch. 1 30V ±3%	10mA ~ 30mA	0.9W	79% Typ.
FDF1205M/S	6V ~ 17V	ch. 1 30V ±3%	10mA ~ 30mA	0.9W	80% Typ.
FDF1301M/S	9V ~ 17V	ch. 1 12V ±3%	70mA ~ 125mA	1.5W	71% Typ.
FDF1302M/S	9V ~ 17V	ch. 1 15V ±3%	70mA ~ 100mA	1.5W	71% Typ.
FDF2301M/S	9V ~ 17V	ch. 1 12V ±3%	35mA ~ 62.5mA	1.5W	73% Typ.
		ch. 2 -12V ±6%	35mA ~ 62.5mA		
FDF2302M/S	9V ~ 17V	ch. 1 15V ±3%	35mA ~ 50mA	1.5W	73% Typ.
		ch. 2 -15V ±6%	35mA ~ 50mA		

**Dimensions**  
(Unit: mm)



\*1 Tail character M indicates master, S indicates slave.  
\*1 品番末尾Mはマスター品、末尾Sはスレーブ品