

FDRM series (Rev. 4.0)



Features

- * RoHS compliant
- * Available in magnetic shielding
- * Low DC resistance
- * Suitable for large currents
- * Ideal for DC-DC converter inductor applications
- * Available on tape and reel for automatic surface mounting

Product Identification

FDRM **127** - **150** **M**
 1 2 3 4

1. Product Code
2. Size Code: 12.5 * 12.5 * 8.0 mm
3. Inductance: 15uH
4. Tolerance: K=±10%, M=±20%, N=±30%

Applications

- * DC/DC converters, etc
- * Power supply for VTRs
- * OA equipment
- * LCD televisions
- * Notebook PCs
- * Portable communication devices

Operating & Storage Condition :

- * Operating Temp : Stand Type: -40 to +85 °C
H Type: -40 to +165 °C
(Range is application specific)
- * Storage Temp : Stand Type -40 to +85 °C
H Type: -40 to +165 °C
(Range is application specific)
- * Storage Life Time : 6 Months @20 °C, RH 65%

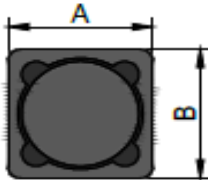

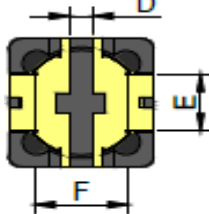
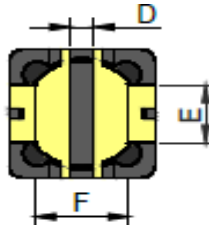
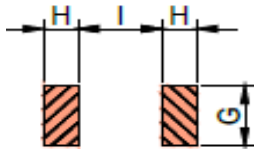
Test Equipment :

- * L-WK3260 LCR Meter
- * RDC-Twintex TM8089A
- * IDC-WK3260+3265B DC-Bias
- * Dimension-Mitutoyo
- * Temperature-Tecpel 305A

Standard Atmospheric Conditions :

- * Ambient Temp : 20 ± 5 °C
- * Relative Humidity : 65 ± 20%

Dimension & Recommended PAD Layout: [mm]

Top View	Side View	Bottom View		Pad Layout					
		(FDRM125/127) 	(FDRM74) 						
Size Code	A(max.)	B(max.)	C(max.)	D(ref.)	E(±0.3)	F(±0.5)	G(ref.)	H(ref.)	I(ref.)
FDRM74	7.8	7.8	4.5	1.3	2.0	4.8	2.4	1.7	4.4
FDRM125	12.5	12.5	6.0	1.5	5.0	7.6	5.6	2.8	7.0
FDRM127	12.5	12.5	8.0	1.5	5.0	7.6	5.6	2.8	7.0

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Electrical Characteristics

P/N	L (uH)	Tolerance	DCR (mΩ) typ.	Isat 1 @L-Drop 10% (A) max.	Isat 2 @L-Drop 35% (A) max.	Irms @ΔT=40℃ (A) max.
FDRM74-1R0	1.0	M/N	10.9	9.50	10.50	8.40
FDRM74-1R5	1.5	M/N	12.5	7.90	9.50	7.80
FDRM74-1R8	1.8	M/N	14.1	7.70	8.60	7.30
FDRM74-2R2	2.2	M/N	16.1	6.80	7.50	6.60
FDRM74-2R7	2.7	M/N	18.9	6.30	7.00	6.20
FDRM74-3R3	3.3	M/N	22.2	6.00	6.50	5.80
FDRM74-3R9	3.9	M/N	25.2	5.40	6.00	5.40
FDRM74-4R7	4.7	M/N	27.7	5.00	5.50	5.20
FDRM74-5R6	5.6	M/N	34.8	4.10	5.00	4.80
FDRM74-6R8	6.8	M/N	40.0	3.80	4.50	4.50
FDRM74-8R2	8.2	M/N	48.0	3.60	4.10	4.30
FDRM74-100	10.0	M	55.6	2.55	3.50	4.00
FDRM74-120	12.0	M	63.2	2.50	3.40	3.80
FDRM74-150	15.0	M	79.0	2.40	3.30	3.50
FDRM74-180	18.0	M	97.4	2.10	2.90	3.20
FDRM74-220	22.0	M	114.0	2.00	2.60	3.00
FDRM74-270	27.0	M	123.0	1.90	2.40	2.80
FDRM74-330	33.0	M	152.0	1.65	2.10	2.40
FDRM74-390	39.0	M	164.0	1.55	2.00	2.20
FDRM74-470	47.0	M	200.0	1.50	1.82	2.00
FDRM74-560	56.0	M	250.0	1.35	1.60	1.78
FDRM74-680	68.0	M	290.0	1.25	1.50	1.65
FDRM74-820	82.0	M	290.0	1.10	1.30	1.50
FDRM74-101	100.0	M	490.0	1.00	1.18	1.30
FDRM74-121	120.0	M	600.0	0.90	1.10	1.15
FDRM74-151	150.0	M	770.0	0.75	0.90	1.00
FDRM74-181	180.0	M	860.0	0.74	0.86	0.95
FDRM74-221	220.0	M	1050.0	0.70	0.77	0.85
FDRM74-271	270.0	M	1300.0	0.63	0.70	0.78
FDRM74-331	330.0	M	1620.0	0.59	0.65	0.72
FDRM74-391	390.0	M	2100.0	0.50	0.59	0.65
FDRM74-471	470.0	M	2340.0	0.45	0.54	0.60
FDRM74-561	560.0	M	3000.0	0.42	0.50	0.56
FDRM74-681	680.0	M	3350.0	0.40	0.44	0.48
FDRM74-821	820.0	M	3800.0	0.35	0.40	0.44
FDRM74-102	1000.0	M	5044.0	0.28	0.35	0.38

* Irms DC current (A) that will cause an approximate ΔT of 40℃.

* Isat DC current (A) that will cause L to drop approximately 10% or 35%.

* Tolerance: M= ±20%, N= ±30%

FDRM series (Rev. 4.0)**Electrical Characteristics**

P/N	L (uH)	Tolerance	DCR (mΩ) typ.	Isat 1 @L-Drop 10% (A) max.	Isat 2 @L-Drop 35% (A) max.	Irms @ $\Delta T=40^{\circ}\text{C}$ (A) max.
FDRM125-2R7	2.7	N	5.00	13.00	14.00	9.00
FDRM125-3R3	3.3	M/N	9.70	12.20	13.20	8.20
FDRM125-3R9	3.9	M/N	10.70	11.00	12.20	7.80
FDRM125-4R7	4.7	M/N	11.40	10.50	11.30	7.50
FDRM125-5R6	5.6	M/N	14.00	9.40	10.00	6.70
FDRM125-6R8	6.8	M/N	15.30	8.50	9.30	6.40
FDRM125-8R2	8.2	M/N	16.60	7.50	8.40	6.10
FDRM125-100	10.0	M	18.60	7.00	8.00	5.75
FDRM125-120	12.0	M	21.80	6.60	7.50	5.30
FDRM125-150	15.0	M	24.00	6.00	6.60	5.00
FDRM125-180	18.0	M	29.40	5.40	6.00	4.70
FDRM125-220	22.0	M	33.50	4.80	5.50	4.40
FDRM125-270	27.0	M	40.50	4.50	5.00	4.00
FDRM125-330	33.0	M	50.30	4.00	4.50	3.63
FDRM125-390	39.0	M	62.00	3.50	4.00	3.20
FDRM125-470	47.0	M	69.00	3.30	3.60	3.00
FDRM125-560	56.0	M	83.00	3.00	3.30	2.70
FDRM125-680	68.0	M	98.00	2.75	3.00	2.50
FDRM125-820	82.0	M	116.00	2.40	2.70	2.20
FDRM125-101	100.0	M	143.00	2.30	2.55	1.90
FDRM125-121	120.0	M	166.00	2.00	2.30	1.70
FDRM125-151	150.0	M	211.00	1.85	2.05	1.50
FDRM125-181	180.0	M	246.00	1.65	1.85	1.35
FDRM125-221	220.0	M	293.00	1.50	1.75	1.25
FDRM125-271	270.0	M	380.00	1.38	1.58	1.10
FDRM125-331	330.0	M	460.00	1.25	1.40	1.00
FDRM125-391	390.0	M	550.00	1.15	1.30	0.92
FDRM125-471	470.0	M	660.00	1.05	1.20	0.83
FDRM125-561	560.0	M	770.00	0.98	1.08	0.76
FDRM125-681	680.0	M	950.00	0.88	0.98	0.69
FDRM125-821	820.0	M	1120.00	0.78	0.88	0.64
FDRM125-102	1000.0	M	1550.00	0.68	0.78	0.56

* Irms DC current (A) that will cause an approximate ΔT of 40°C .

* Isat DC current (A) that will cause L to drop approximately 10% or 35%.

* Tolerance: M= $\pm 20\%$, N= $\pm 30\%$

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P/N	L (uH)	Tolerance	DCR (mΩ) typ.	Isat 1 @L-Drop 10% (A) max.	Isat 2 @L-Drop 35% (A) max.	Irms @ ΔT=40℃ (A) max.
FDRM127-1R0	1.0	N	4.50	20.00	21.00	11.00
FDRM127-2R2	2.2	M/N	6.50	19.00	20.00	10.00
FDRM127-3R3	3.3	M/N	7.59	18.00	19.00	9.60
FDRM127-4R7	4.7	M/N	9.75	14.50	16.60	8.20
FDRM127-5R6	5.6	M/N	12.50	13.50	15.00	7.60
FDRM127-6R8	6.8	M/N	13.40	12.70	13.50	7.35
FDRM127-8R2	8.2	M/N	15.40	11.30	12.50	6.50
FDRM127-100	10.0	M	18.70	10.00	11.50	6.10
FDRM127-120	12.0	M	19.60	9.50	10.50	5.50
FDRM127-150	15.0	M	27.50	8.60	9.50	5.00
FDRM127-180	18.0	M	29.70	7.80	8.60	4.80
FDRM127-220	22.0	M	36.60	7.00	7.70	4.60
FDRM127-270	27.0	M	41.90	6.35	7.00	4.20
FDRM127-330	33.0	M	51.60	5.45	6.30	3.80
FDRM127-390	39.0	M	59.70	5.30	6.00	3.50
FDRM127-470	47.0	M	72.00	5.00	5.50	3.10
FDRM127-560	56.0	M	90.00	4.50	5.00	2.90
FDRM127-680	68.0	M	108.00	4.00	4.30	2.70
FDRM127-820	82.0	M	123.00	3.60	4.00	2.50
FDRM127-101	100.0	M	152.00	3.20	3.50	2.20
FDRM127-121	120.0	M	170.00	3.10	3.40	2.00
FDRM127-151	150.0	M	226.00	2.90	3.20	1.80
FDRM127-181	180.0	M	283.00	2.50	2.80	1.60
FDRM127-221	220.0	M	348.00	2.25	2.50	1.45
FDRM127-271	270.0	M	397.00	2.00	2.30	1.30
FDRM127-331	330.0	M	500.00	1.90	2.00	1.20
FDRM127-391	390.0	M	560.00	1.70	1.90	1.10
FDRM127-471	470.0	M	657.00	1.55	1.70	1.00
FDRM127-561	560.0	M	820.00	1.45	1.60	0.90
FDRM127-681	680.0	M	990.00	1.30	1.45	0.80
FDRM127-821	820.0	M	1260.00	1.20	1.30	0.70
FDRM127-102	1000.0	M	1530.00	1.09	1.20	0.60
FDRM127-222	2200.0	K/M	3050.00	0.70	0.80	0.42
FDRM127-332	3300.0	K/M	4250.00	0.45	0.55	0.35

* Irms DC current (A) that will cause an approximate ΔT of 40℃.

* Isat DC current (A) that will cause L to drop approximately 10% or 35%.

* Tolerance: K= ±10%, M= ±20%, N= ±30%