

**TMDV Series ( Rev. 1.0 )**



**Features**

- \* Designed for high speed, high current switch mode
- \* Gapped ferrite cores for maximum efficiency
- \* Inductance values from 0.01 uH to 0.200 uH
- \* Current up to 64 Amps
- \* Ferrite core material

**Product Identification**

TMDV      1070      -      R15      K  
 1                      2                      3                      4

1. Product Code
2. Size Code
3. Inductance: 0.15uH
4. Tolerance: K=±10%, M=±20%

**Applications**

- \* Voltage regulator modules (VRMs) for servers, microprocessors
- \* High frequency, high current switching power supplies

**Operating & Storage Condition**

- \* Operating Temp. : -55 to +125°C
- \* Storage Temp. : -40 to +85°C
- \* Storage Life Time : 12 Months @25°C , RH 65%

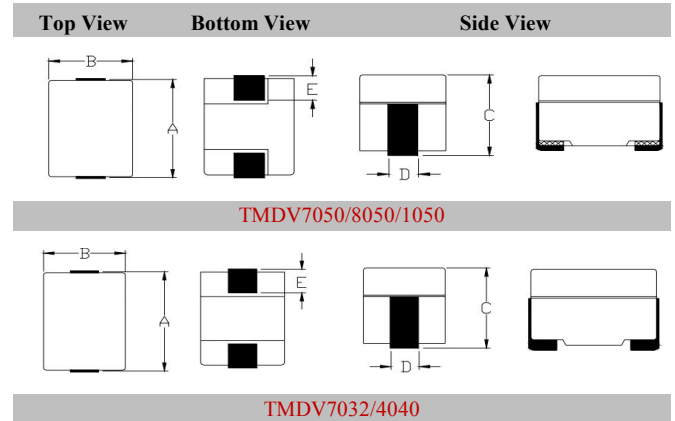
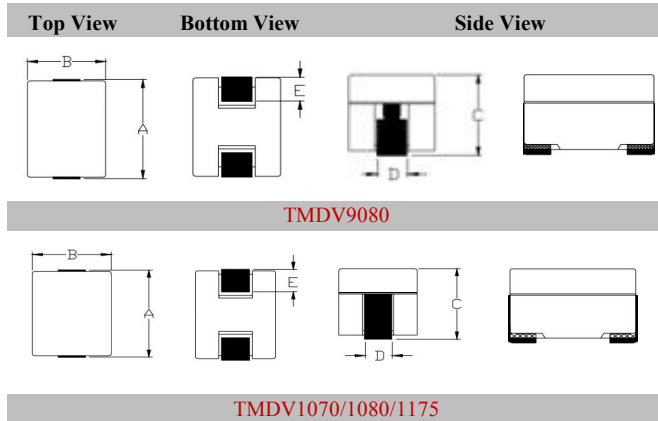
**Test Equipment**

- \* HP4284A,HP42841A- L,IDC,Q,RDC
- \* HP8753D NETWORK ANALYZER- SRF

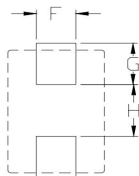
**Standard Atmospheric Conditions**

- \* Ambient Temp : 25±5°C
- \* Relative Humidity : 75±10%

**Dimension & Recommended PAD Layout: [ mm ]**



**Pad Layout**



Size Code	A(max.)	B(max.)	C(max.)	D(±0.2)	E(±0.2)	F(ref.)	G(ref.)	H(ref.)
4040	4.0	4.0	4.0	1.4	1.2	1.9	1.7	0.9
7032	7.4	6.6	3.2	2.8	1.7	3.3	2.2	3.4
7050	7.0	7.0	5.0	2.5	1.5	3.1	2.0	3.4
8050	7.6	7.5	5.0	3.1	2.2	3.4	2.8	2.4
9080	9.6	6.4	8.0	2.1	2.3	2.5	3.2	4.0
1050	10.2	7.0	5.0	2.5	1.5	3.1	2.0	6.4
1070	10.5	8.0	7.0	2.1	2.2	2.6	3.0	5.0
1080	10.2	8.0	8.0	2.1	2.5	2.5	3.6	4.1
1175	11.2	7.2	7.5	1.9	2.5	2.1	3.1	5.0



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## Electrical Characteristics

Part No.	Inductance (nH)	Tolerance (±%)	DCR (mΩ) ±25%	Isat. (A) max.	Irms. (A) max.
TMDV4040-22NM	22	20	0.32	40.0	19.0
TMDV4040-50NM	50	20	0.32	29.0	19.0
TMDV4040-65NM	65	20	0.32	24.0	19.0
TMDV4040-80NM	80	20	0.32	22.0	19.0
TMDV4040-R10M	100	20	0.32	17.0	19.0

\* Test Condition: @100KHz/ 0.1V

\* DCR @ 20°C, test at point a&b which was shown on dimension page.

\* Isat DC current (A) that will cause L to drop approximately 20%

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



## TMDV Series ( Rev. 1.0 )

## Electrical Characteristics

Part No.	Inductance (nH)	Tolerance (±%)	DCR (mΩ)	Isat 1 @ 25°C (A) max.	Isat 2 @ 125°C (A) max.	Irms @ ΔT=40°C (A) max.
TMDV7032-R08K	80	10	1.35 ± 10%	32.0	27.0	28.0
TMDV7032-R10K	100	10	1.35 ± 10%	27.0	23.0	28.0
TMDV7032-R12K	120	10	1.35 ± 10%	22.0	19.0	28.0
TMDV7032-R15K	150	10	1.35 ± 10%	16.0	13.0	28.0
TMDV7050-R07K	72	10	0.25 ± 8%	65.0	50.0	43.0
TMDV7050-R10K	105	10	0.25 ± 8%	44.0	34.0	43.0
TMDV7050-R12K	120	10	0.25 ± 8%	37.0	30.0	43.0
TMDV7050-R15K	150	10	0.25 ± 8%	30.0	24.0	43.0
TMDV7050-R18K	180	10	0.25 ± 8%	25.0	20.0	43.0
TMDV7050-R22K	226	10	0.25 ± 8%	20.0	16.0	43.0
TMDV8050-R03K	32	10	0.17 ± 8%	110.0	95.0	65.0
TMDV8050-R06K	58	10	0.17 ± 8%	83.0	61.0	65.0
TMDV8050-R07K	72	10	0.17 ± 8%	67.0	49.0	65.0
TMDV8050-R10K	100	10	0.17 ± 8%	50.0	35.0	65.0
TMDV8050-R20K	200	10	0.17 ± 8%	20.0	16.0	65.0
TMDV9080-R10K	100	10	0.29 ± 5%	94.0	81.0	51.0
TMDV9080-R12K	120	10	0.29 ± 5%	79.0	68.0	51.0
TMDV9080-R15K	150	10	0.29 ± 5%	65.0	54.5	51.0
TMDV9080-R22K	220	10	0.29 ± 5%	44.0	37.5	51.0
TMDV9080-R28K	280	10	0.29 ± 5%	34.0	29.0	51.0
TMDV9080-R30K	300	10	0.29 ± 5%	32.5	27.5	51.0

\* Test Condition: @100KHz/ 0.1V

\* DCR @ 20°C, test at point a&b which was shown on dimension page.

\* Isat1: Peak current for approximately 20% rolloff at +25°C

\* Isat2: Peak current for approximately 20% rolloff at +125°C

\* Irms: DC current for an approximate temperature rise of 40°C without core loss.

\* Tolerance: K= ±10%



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## Electrical Characteristics

Part No.	Inductance (nH)	Tolerance (±%)	DCR (mΩ)	Isat 1 @ 25°C (A) max.	Isat 2 @ 125°C (A) max.	Irms @ ΔT=40°C (A) max.
TMDV1050-R08K	80	10	0.39 ± 7.5%	90.0	64.0	53.0
TMDV1050-R10K	100	10	0.39 ± 7.5%	73.0	57.0	53.0
TMDV1050-R12K	120	10	0.39 ± 7.5%	60.0	48.0	53.0
TMDV1050-R15K	150	10	0.39 ± 7.5%	47.0	37.0	53.0
TMDV1050-R22K	220	10	0.39 ± 7.5%	33.0	26.0	53.0
TMDV1070-R12K	115	10	0.29 ± 5%	94.0	86.0	61.0
TMDV1070-R15K	150	10	0.29 ± 5%	75.0	60.0	61.0
TMDV1070-R17K	170	10	0.29 ± 5%	66.0	53.0	61.0
TMDV1070-R18K	180	10	0.29 ± 5%	60.0	50.0	61.0
TMDV1070-R22K	220	10	0.29 ± 5%	50.0	40.0	61.0
TMDV1070-R23K	230	10	0.29 ± 5%	48.0	40.0	61.0
TMDV1070-R27K	270	10	0.29 ± 5%	41.0	33.0	61.0
TMDV1070-R30K	300	10	0.29 ± 5%	35.0	30.0	61.0
TMDV1070-R33K	330	10	0.29 ± 5%	33.0	26.5	61.0
TMDV1070-R39K	390	10	0.29 ± 5%	28.0	22.5	61.0
TMDV1070-R47K	470	10	0.29 ± 5%	23.5	19.0	61.0
TMDV1080-R12K	120	10	0.18 ± 5%	95.0	77.0	68.0
TMDV1080-R15K	150	10	0.18 ± 5%	79.0	66.0	68.0
TMDV1080-R18K	180	10	0.18 ± 5%	62.0	52.0	68.0
TMDV1080-R22K	220	10	0.18 ± 5%	58.0	47.0	68.0
TMDV1175-R12K	120	10	0.29 ± 5%	90.0	72.0	55.0
TMDV1175-R15K	150	10	0.29 ± 5%	70.0	56.0	55.0
TMDV1175-R23K	230	10	0.29 ± 5%	45.0	36.0	55.0
TMDV1175-R30K	300	10	0.29 ± 5%	35.0	28.0	55.0
TMDV1175-R40K	400	10	0.29 ± 5%	25.0	20.0	55.0
TMDV1175-R51K	510	10	0.29 ± 5%	18.0	12.4	55.0

\* Test Condition: @100KHz/ 0.1V

\* DCR @ 20°C, test at point a&b which was shown on dimension page.

\* Isat1: Peak current for approximately 20% rolloff at +25°C

\* Isat2: Peak current for approximately 20% rolloff at +125°C

\* Irms: DC current for an approximate temperature rise of 40°C without core loss.

\* Tolerance: K= ±10%

