



# Mag Layers USA, INC

## Specification Sheet

**P/N : MMD-10DZ-SERIES-X1-RU-RU**

### Products:

[Molded Power Chokes](#)

[Multilayer Chip Inductors](#)

[Lan Transformer](#)

[RF Passive / Antennas](#)

[Automotive](#)

### Certifications:

[ISO9001](#)

[IATF16949](#)

[ISO14001](#)

[QC080000](#)

### US Office

5406 Bolsa Ave.,  
Huntington Beach, CA 92649  
(714) 898-8377

### Contact Us

[www.maglayersusa.com](http://www.maglayersusa.com)  
[info@maglayersusa.com](mailto:info@maglayersusa.com)

## APPLICATION

PDA, notebook, desktop, and server applications  
Low profile, high current power supplies  
Battery powered devices  
DC/DC converters in distributed power systems  
DC/DC converters for field programmable gate array

## FEATURES

RoHS Compliant & Halogen Free  
Super low resistance, ultra high current rating  
High performance (I sat) realized by magnetic metal powder core

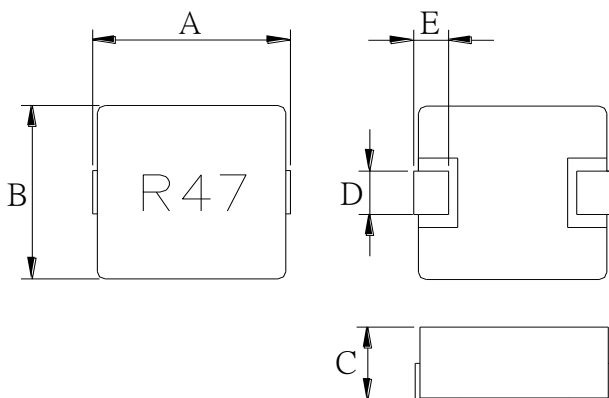
## PRODUCT IDENTIFICATION

①      ②      ③      ④      ⑤  
MMD - 10DZ - R47 M - X1-RU

- ① Product Code
- ② Dimensions: 11.5 x 10.3 x 4.0 mm
- ③ Inductance: R47 =  $0.47\mu\text{H}$
- ④ Tolerance: M =  $\pm 20\%$
- ⑤ Series Type: X1 Type

NOTE: Please refer to the “Product Dimension” for detail dimensions.

## PRODUCT DIMENSION



NOTE: Dimensions in mm

PRODUCT NO.	A	B	C	D	E
MMD-10DZ-SERIES-X1-RU	<b>11.5 Max</b>	<b>10 ± 0.3</b>	<b>4.0 Max</b>	<b>3.0 ± 0.5</b>	<b>2.0 ± 0.5</b>

## **ELECTRICAL REQUIREMENTS**

PART NUMBER	INDUCTANCE Lo(μH) ±20% @0A	R <sub>dc</sub> (mΩ)		HEAT RATING CURRENT(I <sub>dc</sub> ) DC AMPS <sup>1</sup>	SATURATION CURRENT(I <sub>sat</sub> ) DC AMPS <sup>2</sup>
		Typ.	Max		
MMD-10DZ-R36M-X1-RU	<b>0.36</b>	<b>1.05</b>	<b>1.2</b>	<b>30</b>	<b>60</b>
MMD-10DZ-R41M-X1-RU	<b>0.41</b>	<b>1.1</b>	<b>1.3</b>	<b>30</b>	<b>60</b>
MMD-10DZ-R45M-X1-RU	<b>0.45</b>	<b>1.1</b>	<b>1.3</b>	<b>25</b>	<b>27</b>
MMD-10DZ-R47M-X1-RU	<b>0.47</b>	<b>1.6</b>	<b>1.8</b>	<b>26</b>	<b>40</b>
MMD-10DZ-R56M-X1-RU	<b>0.56</b>	<b>1.6</b>	<b>1.8</b>	<b>25</b>	<b>40</b>
MMD-10DZ-R68M-X1-RU	<b>0.68</b>	<b>2.4</b>	<b>2.7</b>	<b>22</b>	<b>39</b>
MMD-10DZ-R88M-X1-RU	<b>0.88</b>	<b>2.7</b>	<b>3.0</b>	<b>20</b>	<b>38</b>
MMD-10DZ-1R0M-X1-RU	<b>1.0</b>	<b>2.9</b>	<b>3.3</b>	<b>18</b>	<b>36</b>
MMD-10DZ-1R5M-X1-RU	<b>1.5</b>	<b>3.8</b>	<b>4.2</b>	<b>16</b>	<b>33</b>
MMD-10DZ-2R2M-X1-RU	<b>2.2</b>	<b>6.6</b>	<b>7.0</b>	<b>12</b>	<b>27</b>
MMD-10DZ-4R7M-X1-RU	<b>4.7</b>	<b>15</b>	<b>16.5</b>	<b>9.5</b>	<b>17</b>
MMD-10DZ-100M-X1-RU	<b>10</b>	<b>27.5</b>	<b>30</b>	<b>6</b>	<b>6</b>

Test frequency: 100 KHz, 0.25V

Testing instrument L: Agilent4284A, WK4235, CH3302/G LCR METER

CH1320, CH1320S BIAS CURRENT SOURCE

R<sub>dc</sub>: CH11025, GOM802 MICRO OHMMETER

### **NOTES:**

1. DC current (I<sub>dc</sub>) that will cause an approximate Δ T of 40°C
2. DC current (I<sub>sat</sub>) that will cause Lo to drop approximately 20%
3. All test data is referenced to 25°C ambient
4. Operating temperature range -40°C to +125°C
5. The part temperature (ambient + temp rise) should not exceed 125°C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.



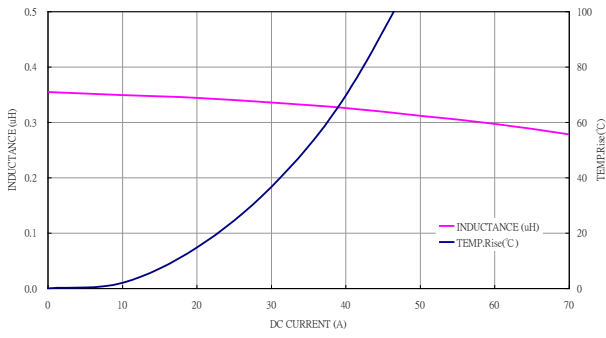
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**MMD-10DZ-SERIES-X1-RU**

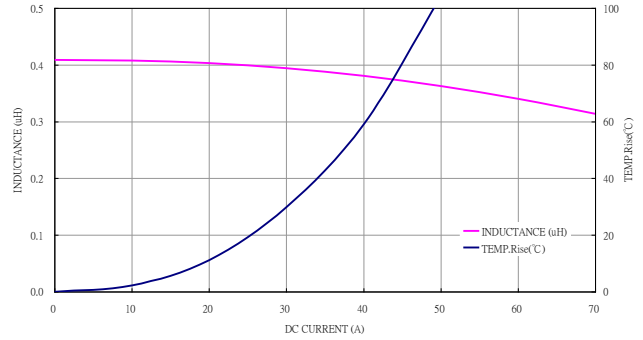
# ELECTRICAL CHARACTERISTICS

Reference data

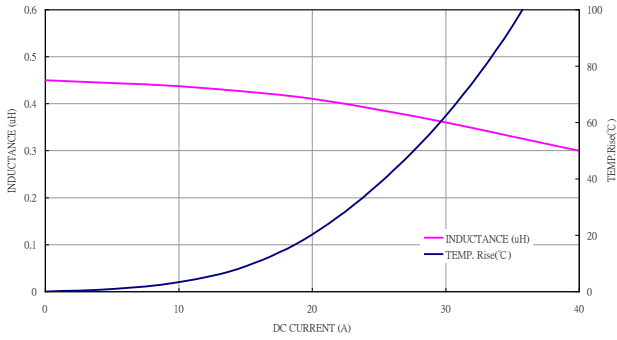
### MMD-10DZ-R36M-X1-RU



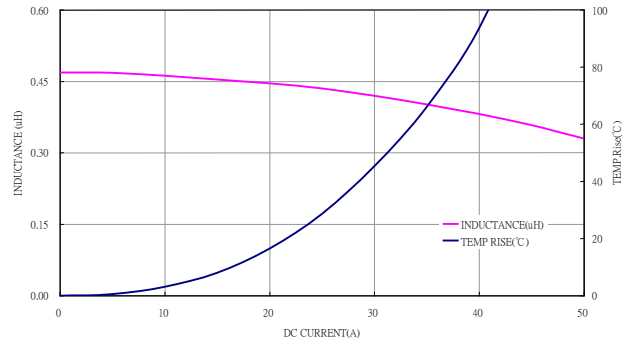
### MMD-10DZ-R41M-X1-RU



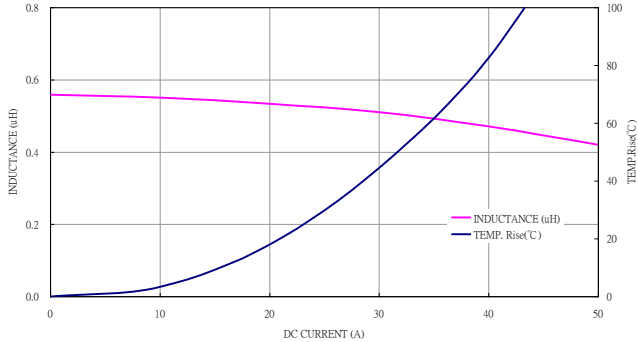
### MMD-10DZ-R45M-X1-RU



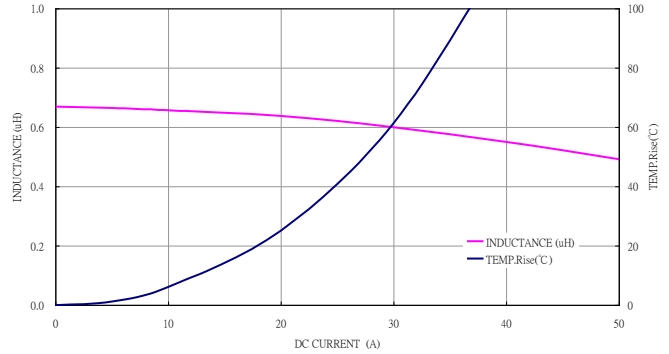
### MMD-10DZ-R47M-X1-RU



### MMD-10DZ-R56M-X1-RU



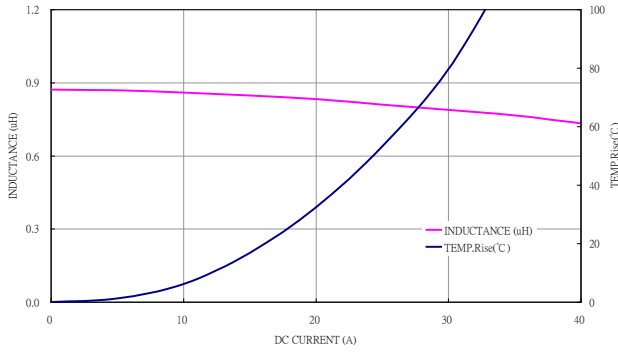
### MMD-10DZ-R68M-X1-RU



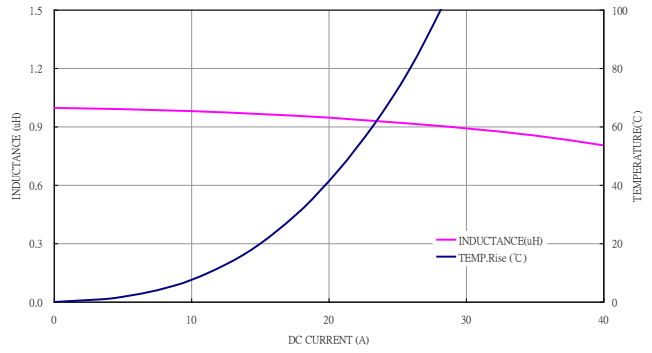
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MMD-10DZ-SERIES-X1-RU

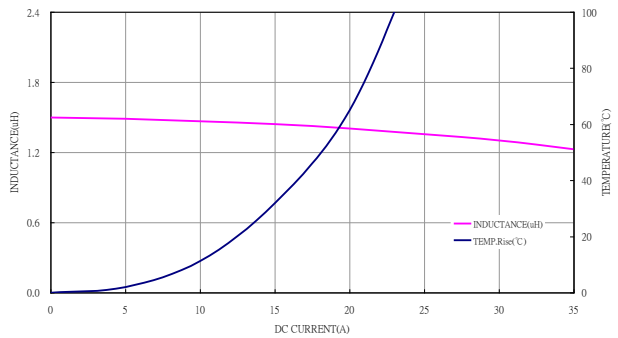
MMD-10DZ-R88M-X1-RU



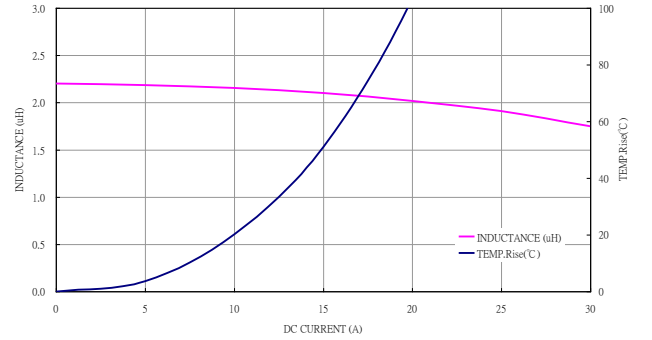
MMD-10DZ-1R0M-X1-RU



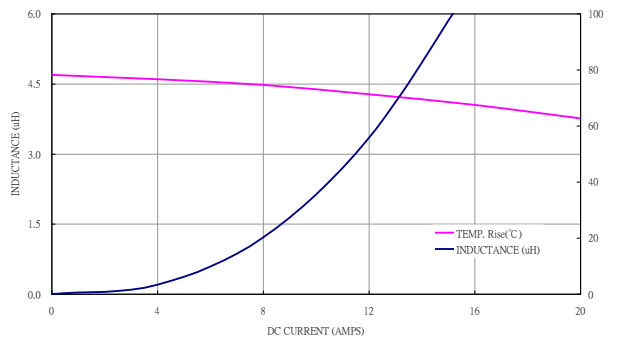
MMD-10DZ-1R5M-X1-RU



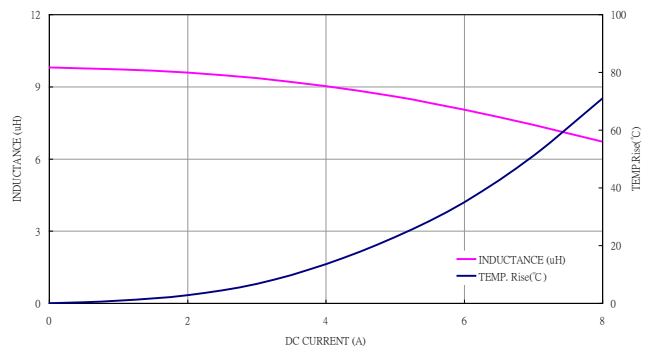
MMD-10DZ-2R2M-X1-RU



MMD-10DZ-4R7M-X1-RU

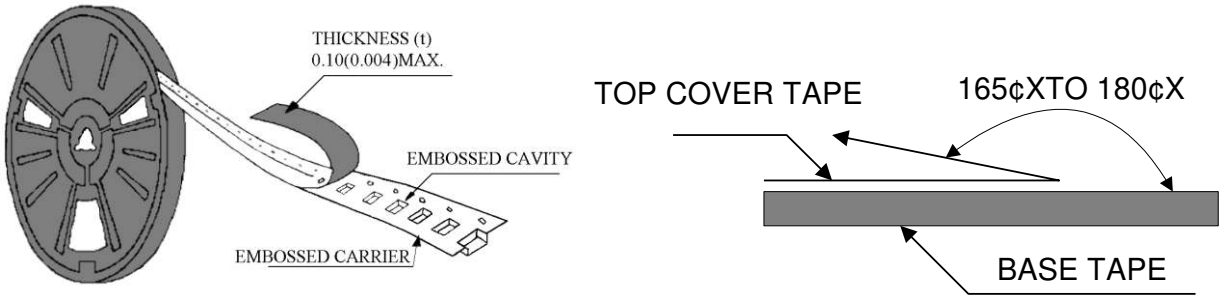


MMD-10DZ-100M-X1-RU



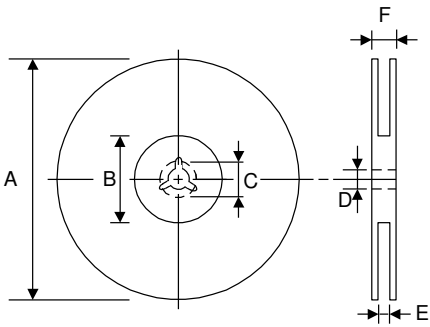
# PACKAGING

## ● Peel-off Force

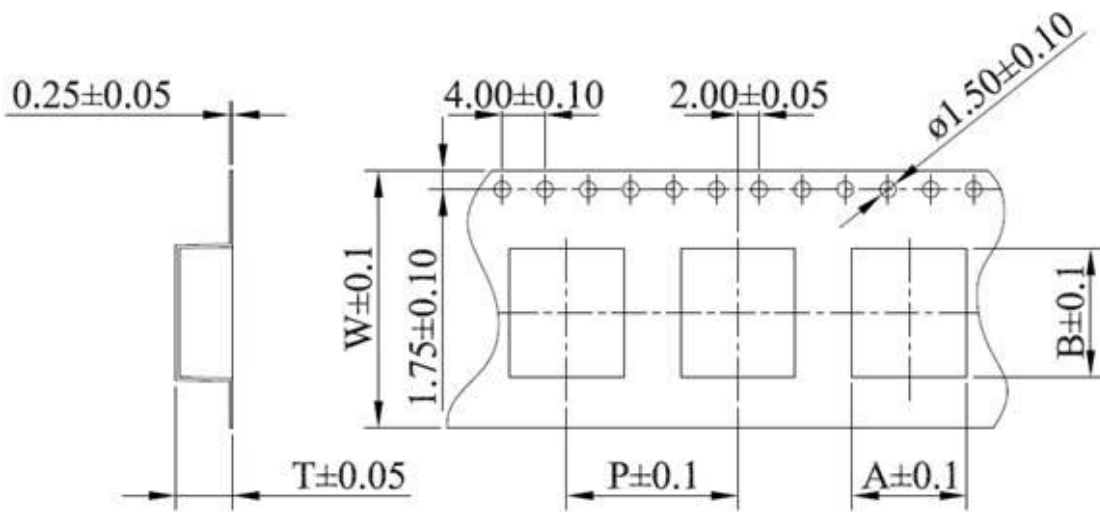


The force for peeling off cover tape is 10 to 70 grams in the arrow direction.

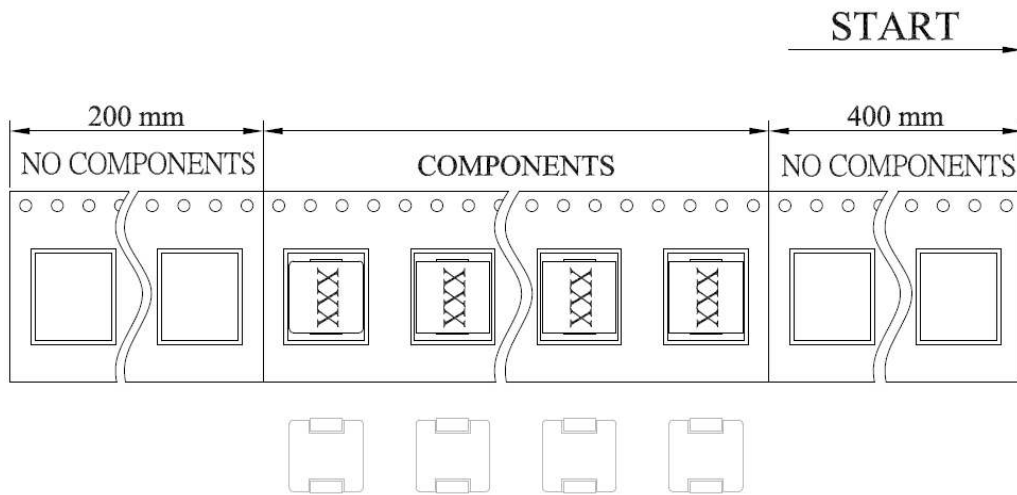
## ● Dimension (Unit: mm)



TYPE	A	B	C	D	E	F
330 mm	330±2	100±1	20±0.5	13±1	24.5±1	30±2



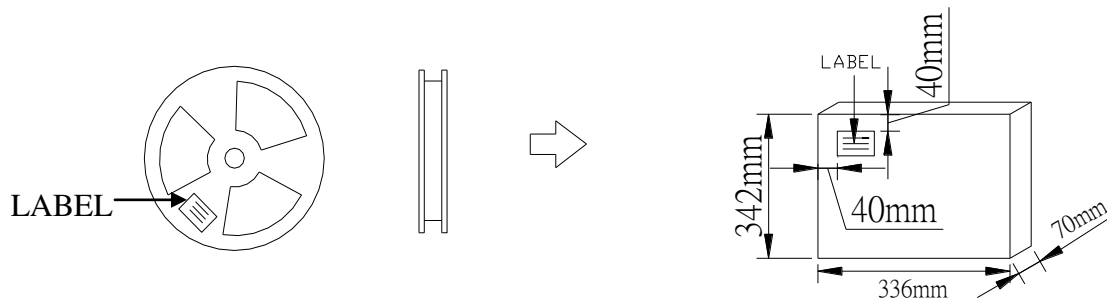
TYPE	SIZE	A	B	W	P	T
MMD	10DZ	10.4	11.5	24	16	4.5



● Taping Quantity

SERIES	10DZ
PCS/Reel	500

Middle packaging: 2 reels/box



External packaging: 5 boxes/carton

