

SMD POWER COIL-MWT03X12M-1ROM



PRODUCT IDENTIFICATION

MWT	03X12	M	- R47	M
Type	Size	Control	Inductance	
				Tol.

FEATURES

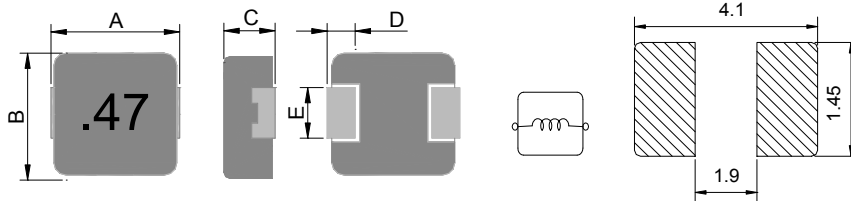
1. Carbonyl powder inductor.
2. Compact design.
3. High current , low DCR , high efficiency.
4. Very low acoustic noise and very low leakage flux noise.
5. High reliability.
6. 100% Lead(Pb) & Halogen-Free and RoHS compliant.
7. Operating temperature -40~+125°C (Including self - temperature rise)

APPLICATIONS

Note PC power system , incl. IMVP-6
 DC/DC converter .

DIMENSIONS (mm)

Recommend PC Board Pattern



Note:

1. The above PCB layout reference only.
2. Recommend solder paste thickness at 0.12mm and above.

Part No.	Size (mm)				
	A	B	C	D	E
MWT 03X12M	3.5 ± 0.2	3.2 ± 0.2	1.0 ± 0.2	0.7 ± 0.2	1.2 ± 0.2

SERIES LIST

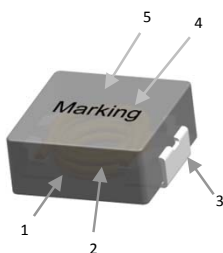
No.	Part No.	L (μH)	TOL. (%)	RDC (mΩ)		I sat (A)	
				Typ.	Max.	Typ.	Typ.
1	MWT 03X12M-R47M	0.47	±20	25	30	7.2	5.0
2	MWT 03X12M-R56M	0.56	±20	31	36	6.6	4.5
3	MWT 03X12M-R68M	0.68	±20	34	40	6.1	4.0
4	MWT 03X12M-R82M	0.82	±20	41	48	5.8	3.5
5	MWT 03X12M-1R0M	1.00	±20	50	60	5.5	3.3
6	MWT 03X12M-1R5M	1.50	±20	71	85	4.0	3.0
7	MWT 03X12M-2R2M	2.20	±20	98	115	3.4	2.7
8	MWT 03X12M-3R3M	3.30	±20	191	210	3.1	2.0
9	MWT 03X12M-4R7M	4.70	±20	266	293	2.8	1.6
10	MWT 03X12M-5R6M	5.60	±20	310	360	2.2	1.5
11	MWT 03X12M-6R8M	6.80	±20	360	400	2.0	1.4
12	MWT 03X12M-8R2M	8.20	±20	420	463	1.7	1.2
13	MWT 03X12M-100M	10.0	±20	498	550	1.4	1.0

Note:

1. Test Frequency: 100KHz /1V
2. All test data referenced to 25°C ambient
3. Saturation Current (Isat) will cause L0 to drop approximately 30%.
4. Heat Rated Current (Irms) will cause the coil temperature rise approximately ΔT of 40°C

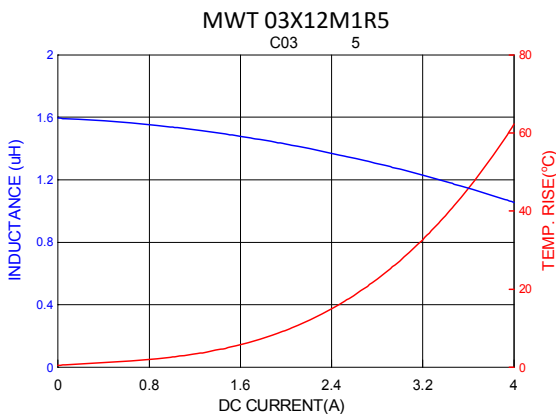
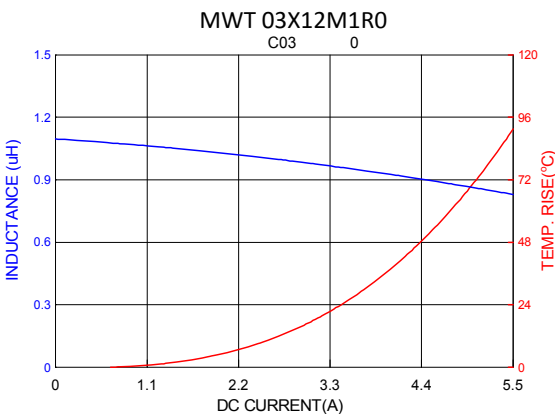
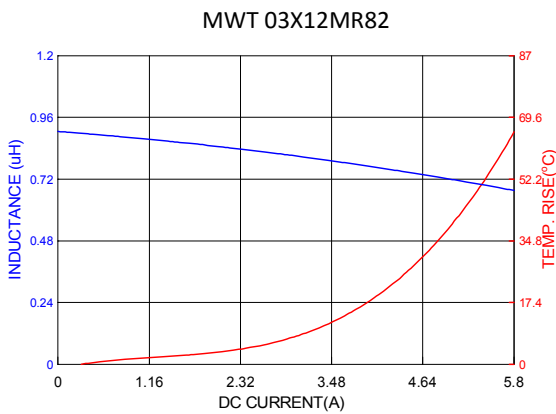
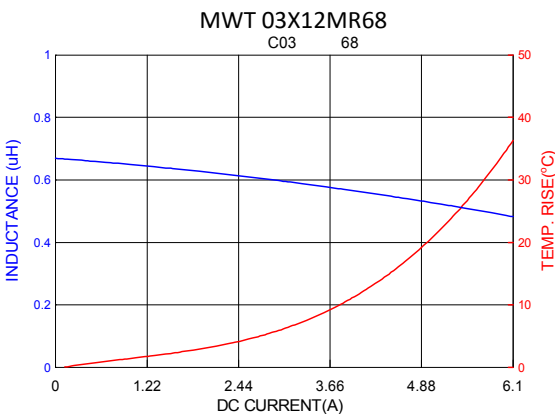
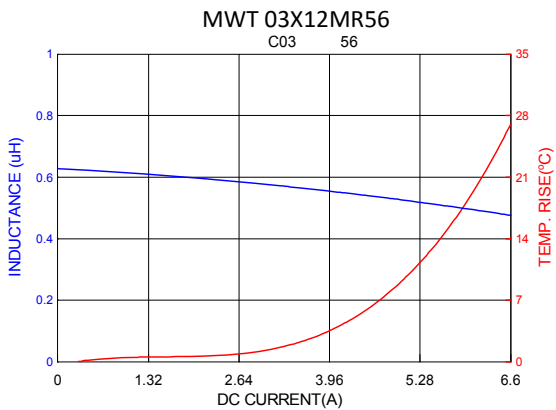
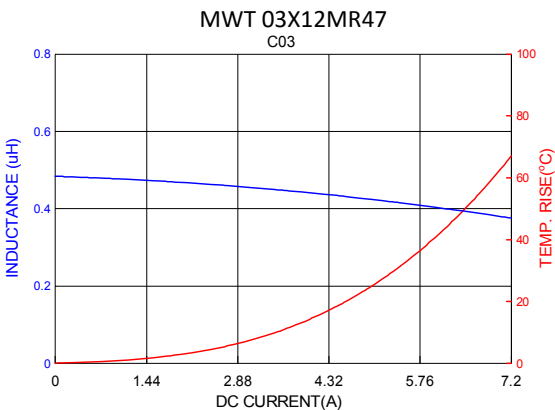
5. The part temperature (ambient + temp rise) should not exceed 125℃ under worst case operating conditions. Circuit design, component, PCB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Special inquiries besides the above common used types can be met on your requirement.

Materials

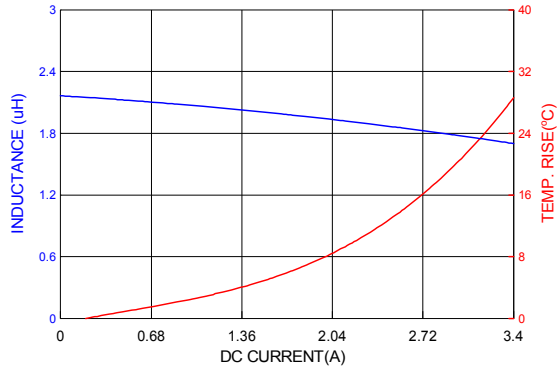


NO	Items	Materials
1	Core	Carbonyl Powder
2	Wire	Polyester Wire or equivalent.
3	Solder Plating	100% Pb free solder(Ni+Sn)
4	Ink	Halogen-free ketone
5	paint	Epoxy resin

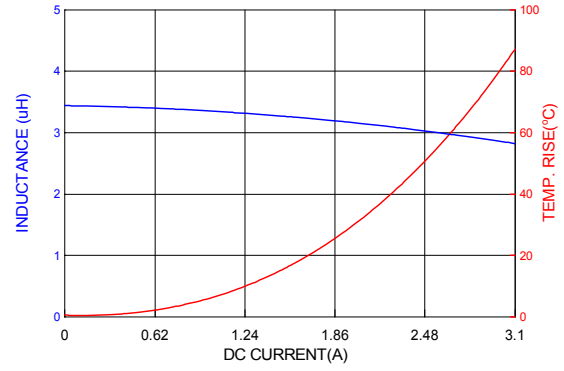
TYPICAL PERFORMANCE CURVES



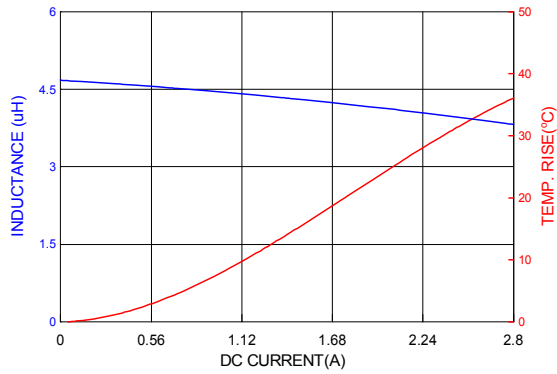
MWT 03X12M2R2



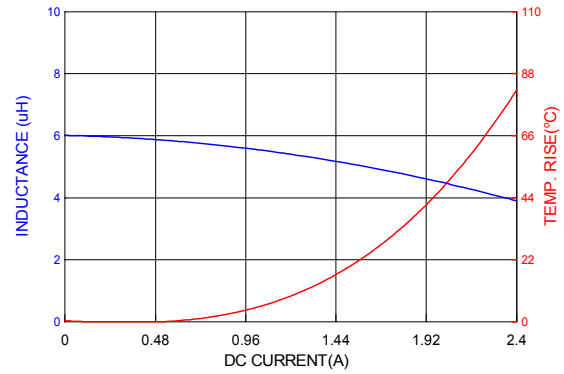
MWT 03X12M3R3



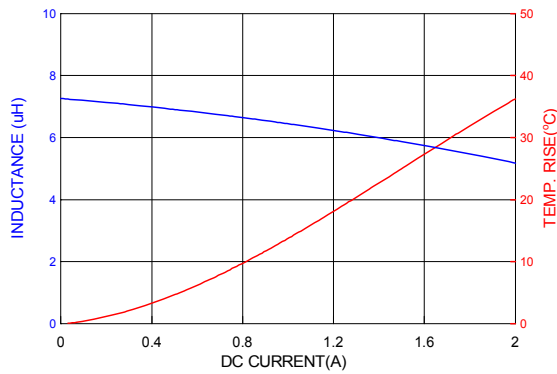
MWT 03X12M4R7



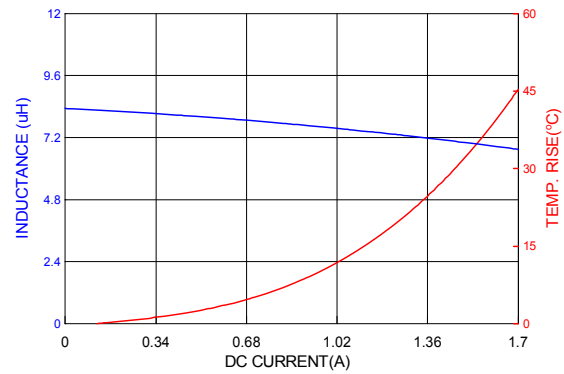
MWT 03X12M5R6



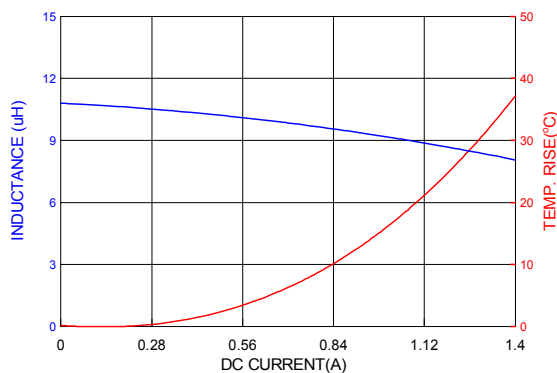
MWT 03X12M6R8



MWT 03X12M8R2

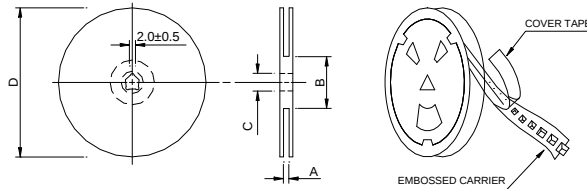


MWT 03X12M100



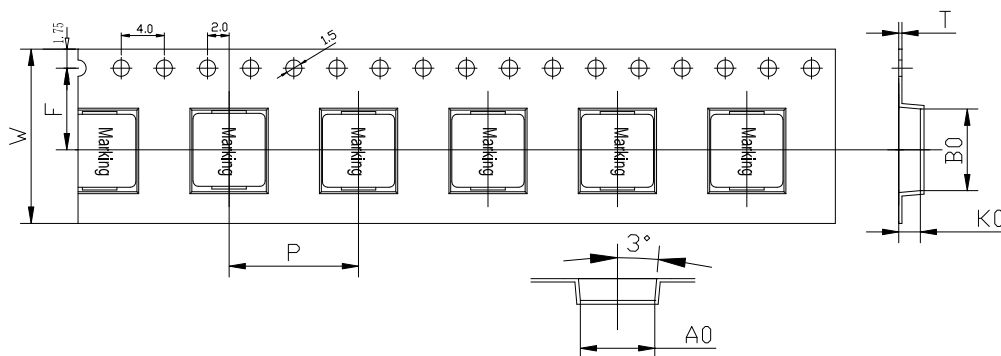
Packaging Information

• Reel Dimension



Type	A(mm)	B(mm)	C(mm)	D(mm)
13"x12mm	12.4+2/-0	100±2	13+0.5/-0.2	330

• Tape Dimension

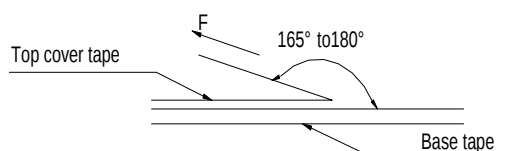


Ao(mm)	Bo(mm)	Ko(mm)	P(mm)	W(mm)	F(mm)	t(mm)
3.5±0.1	3.8±0.1	1.5±0.1	8.0±0.1	12±0.3	5.5±0.1	0.35±0.05

• Packaging Quantity

Size	Reel	Inner box	Carton
MWT 03X12M	4000	8000	32000

• Tearing Off Force



The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions (referenced ANSI/EIA-481-C-2003 of 4.11 standard)

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

■ Application Notice

- Storage Conditions(component level)

To maintain the solderability of terminal electrodes:

1. Products meet IPC/JEDEC J-STD-020D standard-MSL, level 1.
2. Temperature and humidity conditions: Less than 40℃ and 60% RH.
3. Recommended products should be used within 12 months form the time of delivery.
4. The packaging material should be kept where no chlorine or sulfur exists in the air.

- Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.