

FEATURES

RoHS compliant.

Super low resistance, ultra high current rating.

High performance (I sat) realized by metal dust core.

Frequency Range: up to 3MHz.

APPLICATION

PDA, notebook, desktop, and server applications.

Low profile, high current power supplies.

DC/DC converters in distributed power systems.

DC/DC converters for field programmable gate array.

PRODUCT IDENTIFICATION

① ② ③ ④ ⑤

MMD - 04AB - 1R0 M - V1

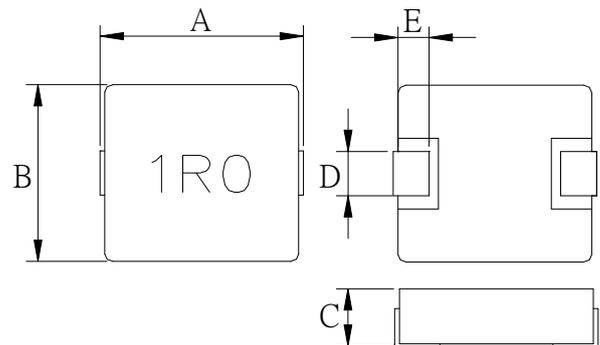
① Product Code

② Dimensions: 04AB = 4.5 x 4.0 x 1.2 mm

③ Inductance Code: 1R0 = 1.0 μ H

④ Tolerance: M = $\pm 20\%$

⑤ Series Type : V1 Type



PRODUCT DIMENSION

NOTE : Dimension in mm

PRODUCT NO.	A	B	C	D	E
MMD-04AB	4.45 \pm 0.25	4.06 \pm 0.25	1.2Max	2.0 \pm 0.3	0.76 \pm 0.3
MMD-04BZ	4.45 \pm 0.25	4.06 \pm 0.25	2.0Max	2.0 \pm 0.3	0.76 \pm 0.3
MMD-05BZ	5.0 \pm 0.2	4.7 \pm 0.2	2.0Max	2.0 \pm 0.3	1.0 \pm 0.3
MMD-05CZ	5.0 \pm 0.2	4.7 \pm 0.2	3.0Max	2.0 \pm 0.3	1.0 \pm 0.3
MMD-06AB	6.86 \pm 0.38	6.47 \pm 0.25	1.2Max	3.0 \pm 0.3	1.27 \pm 0.3
MMD-06AE	6.86 \pm 0.38	6.47 \pm 0.25	1.5Max	3.0 \pm 0.3	1.27 \pm 0.3
MMD-06AH	6.86 \pm 0.38	6.47 \pm 0.25	1.8Max	3.0 \pm 0.3	1.27 \pm 0.3
MMD-06CZ	6.86 \pm 0.38	6.47 \pm 0.25	3.0Max	3.18 \pm 0.3	1.27 \pm 0.3
MMD-06DZ	6.86 \pm 0.38	6.47 \pm 0.25	3.0Max	3.18 \pm 0.3	1.27 \pm 0.3
MMD-06EZ	6.86 \pm 0.38	6.47 \pm 0.25	5.0Max	3.18 \pm 0.3	1.27 \pm 0.3
MMD-08AE	8.3 \pm 0.3	8.1 \pm 0.3	1.5Max	3.0 \pm 0.3	1.5 \pm 0.3
MMD-08EZ	8.3 \pm 0.3	8.1 \pm 0.3	5.0Max	3.0 \pm 0.3	1.5 \pm 0.3
MMD-10DZ	11.5 Max	10.0 \pm 0.3	4.0Max	3.0 \pm 0.5	2.2 \pm 0.3
MMD-12CE	13.2 \pm 0.5	12.9Max	3.5Max	3.5 \pm 0.5	2.3 \pm 0.3
MMD-12EZ	13.2 \pm 0.5	12.9Max	5.0Max	3.5 \pm 0.5	2.3 \pm 0.3
MMD-12FD	13.2 \pm 0.5	12.9Max	6.4Max	3.1 \pm 0.5	2.3 \pm 0.3
MMD-20JZ	22.0 \pm 1.0	20 \pm 0.3	10.0Max	3.0 \pm 0.5	2.3 \pm 0.3

* All the electrical charts will be available upon request. Please contact info@maglayers.com.tw

MMD-04AB SPECIFICATION

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PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT(I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
MMD-04AB-47NM-V1	0.047	3.25	3.75	13.0	32.0
MMD-04AB-R10M-V1	0.10	5.50	6.00	11.5	25.0
MMD-04AB-R22M-V1	0.22	11.0	12.0	8.5	20.0
MMD-04AB-R47M-V1	0.47	20.0	22.0	5.0	13.0
MMD-04AB-1R0M-V1	1.00	50.0	52.5	4.0	8.5
MMD-04AB-2R2M-S1	2.2	80.2	90.0	2.45	2.75
MMD-04AB-3R3M-S1	3.3	113	124	1.85	2.30
MMD-04AB-4R7M-S1	4.7	130	145	1.50	1.70
MMD-04AB-6R8M-S1	6.8	312	374	1.4	1.6
MMD-04AB-8R2M-S1	8.2	341	409	1.3	1.5
MMD-04AB-100M-S1	10	386	463	1.2	1.4

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MMD-04BZ SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT(I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
MMD-04BZ-R10M-V1	0.10	4.50	5.00	11.0	35.0
MMD-04BZ-R22M-V1	0.22	7.30	8.00	13.0	24.0
MMD-04BZ-R33M-V1	0.33	11.6	13.0	9.30	18.0
MMD-04BZ-R47M-V1	0.47	16.0	18.0	5.60	11.5
MMD-04BZ-1R0M-V1	1.00	33.0	37.0	3.75	8.50
MMD-04BZ-2R2M-V1	2.20	80.0	90.0	2.85	6.00
MMD-04BZ-4R7M-S1	4.7	118	132	2.4	2.8
MMD-04BZ-6R8M-S1	6.8	162	178	2	2.1
MMD-04BZ-8R2M-S1	8.2	188	207	1.8	2.0
MMD-04BZ-100M-S1	10	256	282	1.6	1.8
MMD-04BZ-220M-S1	22	460	550	0.8	1.0

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MMD-05BZ SPECIFICATION

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PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT(I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
		MMD-05BZ-R10M-M1	0.10		
MMD-05BZ-R22M-M1	0.22	4.9	5.2	15	18.7
MMD-05BZ-R33M-M1	0.33	7.6	8.2	12	21.3
MMD-05BZ-R47M-M1	0.47	8.1	8.8	11.5	17.9
MMD-05BZ-R68M-M1	0.68	11.2	12.4	10	12.8
MMD-05BZ-1R0M-M1	1.0	18.9	20	7	13.7
MMD-05BZ-2R2M-M1	2.2	45.6	50.1	4.2	10.7
MMD-05BZ-3R3M-M1	3.3	79.2	85.5	3.3	7.3
MMD-05BZ-4R7M-M1	4.7	108	116.6	2.8	4.3
MMD-05BZ-5R6M-M1	5.6	113	122	2.5	3.9
MMD-05BZ-6R8M-M1	6.8	139	150	2.4	3.7
MMD-05BZ-100M-M1	10	184	199	2.3	3.4

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MMD-05CZ SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT(I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
		MMD-05CZ-R68M-X1	0.68		
MMD-05CZ-1R0M-X1	1.0	13	14	7.0	11
MMD-05CZ-1R2M-X1	1.2	15	16	6.5	10.5
MMD-05CZ-1R5M-X1	1.5	20	25	6.0	10
MMD-05CZ-2R2M-X1	2.2	29	35	5.5	9
MMD-05CZ-3R3M-X1	3.3	32	38	5.0	7
MMD-05CZ-4R7M-X1	4.7	47.7	53	4.6	6

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MMD-06AB SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT(I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
		MMD-06AB-R47M-M1	0.47		
MMD-06AB-R68M-M1	0.68	17	19	7	8
MMD-06AB-1R0M-M1	1.0	26	28	6	7
MMD-06AB-1R5M-M1	1.5	35.5	40.8	4	6
MMD-06AB-3R3M-S1	3.3	90	103	3	3.6



MMD-06AB-4R7M-S1	4.7	155	170	2.4	2.8
MMD-06AB-6R8M-S1	6.8	189	217	2.1	2.4
MMD-06AB-100M-S1	10	250	290	1.8	2.2

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MMD-06AE SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT(I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
MMD-06AE-3R3M-S1	3.3	78.2	89.9	4.2	5.1
MMD-06AE-4R7M-S1	4.7	96.6	111	3.8	4.6
MMD-06AE-5R6M-S1	5.6	146	167	2.8	3.1
MMD-06AE-6R8M-S1	6.8	173	198	2.4	2.64
MMD-06AE-8R2M-S1	8.2	188	216	2.3	2.5
MMD-06AE-100M-S1	10	216	248	2.16	2.3

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MMD-06AH SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT(I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
MMD-06AH-R10M-V1	0.10	3.0	3.5	18	40
MMD-06AH-R22M-V1	0.22	5.3	5.7	14	26
MMD-06AH-R33M-V1	0.33	6.6	7.0	12	18
MMD-06AH-R47M-V1	0.47	8.4	9.3	11	18
MMD-06AH-R82M-V1	0.82	13.8	15.9	8	17
MMD-06AH-1R0M-V1	1.0	17.5	18.3	7	14
MMD-06AH-2R2M-V1	2.2	40.3	46.0	3.75	13
MMD-06AH-3R3M-V1	3.3	56.2	60.1	3.25	10
MMD-06AH-4R7M-V1	4.7	76.6	78.0	3	8
MMD-06AH-6R8M-S1	6.8	120	138	2.5	3.8
MMD-06AH-8R2M-S1	8.2	132	151	2.2	3.2
MMD-06AH-100M-S1	10	145	166	2.0	2.3

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MMD-06CZ SPECIFICATION

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PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT((I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
MMD-06CZ-R10M-V1	0.10	1.5	1.7	32.5	60.0
MMD-06CZ-R22M-V1	0.22	2.5	2.8	23.0	40.0
MMD-06CZ-R33M-V1	0.33	3.5	3.9	20.0	30.0
MMD-06CZ-R47M-V1	0.47	4.0	4.2	17.5	26.0
MMD-06CZ-R68M-V1	0.68	5.0	5.5	15.5	25.0
MMD-06CZ-R82M-V1	0.82	6.7	8	13.0	24.0
MMD-06CZ-1R0M-V1	1.0	9	10	11.0	22.0
MMD-06CZ-1R5M-V1	1.5	14	15	9.0	18.0
MMD-06CZ-2R2M-V1	2.2	18	20	8.0	14.0
MMD-06CZ-3R3M-V1	3.3	28	30	6.0	13.5
MMD-06CZ-4R7M-V1	4.7	37	40	5.5	10.0
MMD-06CZ-6R8M-V1	6.8	54	60	4.5	8.0
MMD-06CZ-8R2M-V1	8.2	64	68	4.0	7.5
MMD-06CE-100M-M2	10	67.8	71.2	4.0	3.5

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MMD-06DZ SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT((I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
MMD-06DZ-R47M-X2	0.47	2.6	2.9	22	22
MMD-06DZ-R56M-X2	0.56	3.4	3.7	18	20
MMD-06DZ-R68M-X2	0.68	3.9	4.2	13	15
MMD-06DZ-1R5M-X2	1.5	12	14	10	17
MMD-06DZ-2R2M-X2	2.2	16.5	18	8.5	16
MMD-06DZ-3R3M-X2	3.3	21	23	7.0	13
MMD-06DZ-4R7M-X2	4.7	33.2	38.0	6.0	8.0

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MMD-06EZ SPECIFICATION

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PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT((Idc) DC AMPS ¹	SATURATION CURRENT(Isat) DC AMPS ²
		Typ.	Max		
MMD-06EZ-R56M-V1	0.56	3.4	3.6	20	12
MMD-06EZ-R68M-V1	0.68	4.2	4.5	18	11.5
MMD-06EZ-R82M-V1	0.82	4.6	4.9	16.5	13
MMD-06EZ-1R0M-V1	1.0	5.6	6.5	13	15
MMD-06EZ-1R5M-V1	1.5	8.6	9.0	12	12
MMD-06EZ-2R2M-V1	2.2	13	13.6	10	10
MMD-06EZ-3R3M-V1	3.3	19.9	20.9	8	8
MMD-06EZ-4R7M-V1	4.7	28.9	30.3	6.5	7
MMD-06EZ-5R6M-V1	5.6	32.7	34.4	6	6.5
MMD-06EZ-6R8M-V1	6.8	42.5	44.6	5.5	5.5
MMD-06EZ-8R2M-V1	8.2	48.3	50.7	5	5
MMD-06EZ-100M-V1	10	67.9	71.3	4.5	4.5

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MMD-08AE SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT((Idc) DC AMPS ¹	SATURATION CURRENT(Isat) DC AMPS ²
		Typ.	Max		
MMD-08AE-3R3M-M1	3.3	42	47	5.5	7
MMD-08AE-4R7M-M1	4.7	52	58	5	6

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MMD-08EZ SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT((Idc) DC AMPS ¹	SATURATION CURRENT(Isat) DC AMPS ²
		Typ.	Max		
MMD-08EZ-470M-S1	47	196	216	2.4	2.4

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MMD-10DZ SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT((Idc) DC AMPS ¹	SATURATION CURRENT(Isat) DC AMPS ²
		Typ.	Max		
MMD-10DZ-R36M-X1	0.36	1.05	1.2	30	60

MMD-10DZ-R45M-X1	0.45	1.3	1.5	29	45
MMD-10DZ-R56M-X1	0.56	1.6	1.8	25	40
MMD-10DZ-R68M-X1	0.68	2.4	2.7	22	39
MMD-10DZ-R88M-X1	0.88	2.7	3.0	20	38
MMD-10DZ-1R0M-X1	1.0	3.0	3.3	18	36
MMD-10DZ-1R5M-X1	1.5	3.8	4.2	16	33
MMD-10DZ-2R2M-X1	2.2	6.7	7.0	12	27
MMD-10DZ-3R3M-X2	3.3	10.8	11.8	10	16
MMD-10DZ-4R7M-X2	4.7	15	16.5	9.5	17
MMD-10DZ-5R6M-X2	5.6	20	23	7.5	14
MMD-10DZ-6R8M-X2	6.8	22.5	25	6.5	9
MMD-10DZ-100M-X2	10	27.5	30.0	6	6

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MMD-12CE SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT(I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
MMD-12CE-R15M-V1	0.15	1.0	1.2	41	75
MMD-12CE-R22M-V1	0.22	1.1	1.3	38.5	65
MMD-12CE-R33M-V1	0.33	1.3	1.5	36.5	62
MMD-12CE-R47M-V1	0.47	1.6	2	32	55
MMD-12CE-R60M-V1	0.60	1.8	2.2	29	51
MMD-12CE-R68M-V1	0.68	2.3	2.5	28	49
MMD-12CE-R82M-V1	0.82	2.6	3	25	44
MMD-12CE-1R0M-V1	1.0	3.3	3.5	24	40
MMD-12CE-1R5M-V1	1.5	5.1	5.5	19	35
MMD-12CE-1R8M-V1	1.8	6.5	7	16.5	30
MMD-12CE-2R2M-V1	2.2	7.2	8	16	29
MMD-12CE-3R3M-V1	3.3	11.0	12	12	27
MMD-12CE-4R7M-V1	4.7	14.3	15	10	24
MMD-12CE-5R6M-V1	5.6	18.3	19	9.5	19
MMD-12CE-6R8M-V1	6.8	19.8	22	9	18
MMD-12CE-8R2M-V1	8.2	24.8	28	8.5	16
MMD-12CE-100M-V1	10	30.4	34	7	14

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MMD-12EZ SPECIFICATION

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PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT((I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
MMD-12EZ-R22M-V1	0.22	0.64	0.80	51	110
MMD-12EZ-R33M-V1	0.33	0.84	1.1	42	80
MMD-12EZ-R47M-V1	0.47	1.1	1.3	38	65
MMD-12EZ-R56M-V1	0.56	1.3	1.5	36	55
MMD-12EZ-R68M-V1	0.68	1.5	1.7	34	54
MMD-12EZ-R82M-V1	0.82	2.0	2.3	31	53
MMD-12EZ-1R0M-V1	1.0	2.1	2.5	29	50
MMD-12EZ-1R5M-V1	1.5	3.4	4.1	23	48
MMD-12EZ-1R8M-V1	1.8	4.2	4.9	19	40
MMD-12EZ-2R2M-V1	2.2	5.6	5.5	20	32
MMD-12EZ-3R3M-V1	3.3	7.7	9.2	15	32
MMD-12EZ-4R7M-V1	4.7	12.8	15.0	12	27
MMD-12EZ-5R6M-V1	5.6	14.0	16.5	11.5	22
MMD-12EZ-6R8M-V1	6.8	15.4	18.5	11	21
MMD-12EZ-7R8M-V1	7.8	17.2	20.5	10	18
MMD-12EZ-8R2M-V1	8.2	18.9	22.5	9.5	18
MMD-12EZ-100M-V1	10	21.4	25.5	9.0	16
MMD-12EZ-150M-V1	15	27.9	33	8	14
MMD-12EZ-470M-M1	47	59	67	7	6

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MMD-12FD SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT((I _{dc}) DC AMPS ¹	SATURATION CURRENT(I _{sat}) DC AMPS ²
		Typ.	Max		
MMD-12FD-R22M-V1	0.22	0.63	0.70	53	112
MMD-12FD-R33M-V1	0.33	0.83	0.90	46	65
MMD-12FD-R47M-V1	0.47	1.0	1.2	41	63
MMD-12FD-R56M-V1	0.56	1.2	1.4	37	62



MMD-12FD-R68M-V1	0.68	1.4	1.6	35	60
MMD-12FD-R82M-V1	0.82	1.6	1.9	33	50
MMD-12FD-1R0M-V1	1.0	1.7	2.0	32	49
MMD-12FD-2R2M-V1	2.2	3.5	4.2	22	40
MMD-12FD-3R3M-V1	3.3	5.7	6.8	18	35
MMD-12FD-4R7M-V1	4.7	9.3	11.2	13.5	30
MMD-12FD-6R8M-V1	6.8	13.1	14	11.5	16.5
MMD-12FD-8R2M-V1	8.2	14.5	15.5	10.5	16
MMD-12FD-100M-V1	10	16.4	17.2	10	15.5

* All the electrical charts will be available upon request. Please contact info@maglayers.com.tw

MMD-20JZ SPECIFICATION

PART NUMBER	INDUCTANCE Lo(μ H) \pm 20% @0A	R _{dc} (m Ω)		HEAT RATING CURRENT((Idc) DC AMPS ¹	SATURATION CURRENT(Isat) DC AMPS ²
		Typ.	Max		
MMD-20JZ-100M-M1	10	8	8.7	19	25

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NOTES:

1. Idc : DC current (A) that will cause an approximate Δ T of 40°C
2. Isat : DC current (A) that will cause Lo to drop approximately 20%
3. All test data is referenced to 25°C ambient
4. Operating Temperature Range -55°C to +125°C
5. TEST FREQUENCY:100KHz,0.25V
6. TESTING INSTRUMENT L :Agilent4284A,WK4235,CH3302/G LCR METER
CH1320,CH1320S BIAS CURRENT SOURCE
R_{dc} :CH11025,GOM802 MICRO OHMMETER