

## ■ Features

- Magnetically shielded construction, low DC resistance
- The use of magnetic iron power ensure capability for large current
- Low audible core noise
- Ideal for DC-DC converter applications in land held personal computer and etc.
- Frequency Range: up to 30MHZ
- ROHS compliant

## ■ Applications

- Smart phone MID
- Next-generation mobile devices with multifunction such as adding color TV and digital movie cameras Flat-screen TVs, blue-ray disc recorders set top box
- Notebook, desktop computers servers graphic cards
- Portable gaming devices, personal navigation systems, personal multimedia devise
- Automotive systems
- Telecom base stations

## ■ Lead free part numbering

ETC	0630	H	100	M	T	T
Product type	size	Material	Inductance value	Inductance Tolerance	Package	Remarks
ETC	0415 0420 ... 1770	H=Alloy T=Carbonyl S=Pre-mix	R47=0.47UH 2R2=2.2UH 100=10UH 101=100UH	K=±10% M=±20% N=±30%	T=Reel B=Bag	T=Standard S=Special

(1) Series Type

(2) Dimension A\*C

(3) Material code H, S, T

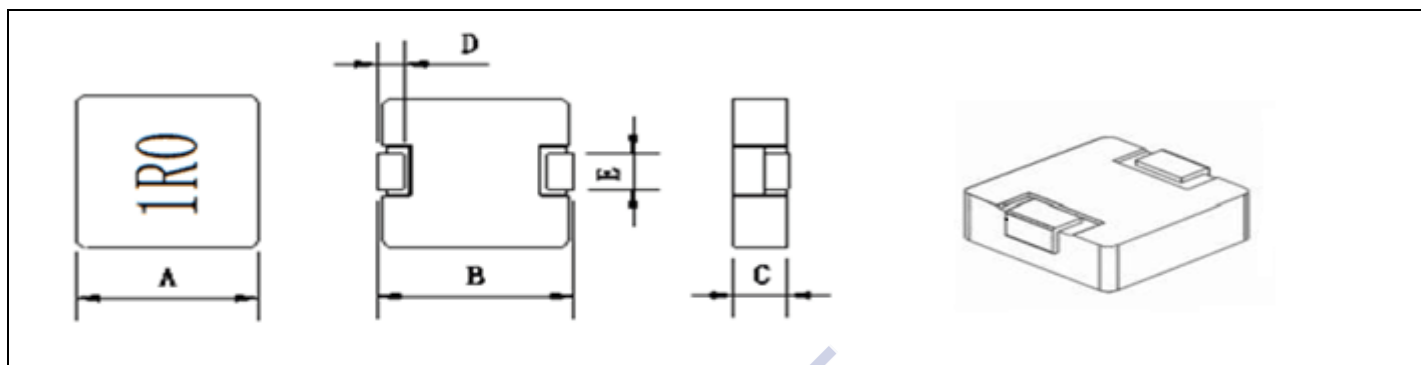
(4) Inductance 2R2=2.2UH 100=10UH 101=100UH

(5) Inductance tolerance M=+/-20% N=+/-30% K=+/-10%

(6) Packaging packed in embossed carrier tape

(7) Remarks

■ Dimensions



Size	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
0415	4.06±0.30	4.49±0.40	1.5MAX	1.1±0.3	1.5±0.3
0420	4.06±0.30	4.49±0.40	2.0MAX	1.1±0.3	1.5±0.3
0515	5.3MAX	5.6±0.3	1.5MAX	1.2±0.3	2.0±0.3
0520	5.3MAX	5.6±0.3	2.0MAX	1.2±0.3	2.0±0.3
0530	5.3MAX	5.6±0.3	3.0MAX	1.2±0.3	2.0±0.3
0618	6.6±0.3	7.6MAX	1.8MAX	1.6±0.5	3.0±0.3
0620	6.6±0.3	7.6MAX	2.0MAX	1.6±0.5	3.0±0.3
0624	6.6±0.3	7.6MAX	2.4MAX	1.6±0.5	3.0±0.3
0630	6.6±0.3	7.6MAX	3.0MAX	1.6±0.5	3.0±0.3
0640	6.6±0.3	7.6MAX	4.0MAX	1.6±0.5	3.0±0.3
0650	6.6±0.3	7.6MAX	5.0MAX	1.6±0.5	3.0±0.3
1030	10.8MAX	11.8MAX	3.0MAX	2.0±0.5	3.0±0.3
1040	10.8MAX	11.8MAX	4.0MAX	2.0±0.5	3.0±0.3
1050	10.8MAX	11.8MAX	5.0MAX	2.0±0.5	3.0±0.3
1335	12.8±0.5	13.5±1.0	3.5MAX	2.5±0.5	3.5±0.5
1340	12.8±0.5	13.5±1.0	4.0MAX	2.5±0.5	3.5±0.5
1350	12.8±0.5	13.5±1.0	5.0MAX	2.5±0.5	3.5±0.5
1365	12.8±0.5	13.5±1.0	6.5MAX	2.5±0.5	3.5±0.5
1770	17.5MAX	19.0MAX	7.0MAX	3.3±0.5	11.7±0.3

This description in the this catalogue is subject to change without notice

## ■ Specification

### ETC0415

Series	Standard Values - Case Size 0415 (4.0 x 4.5 x 1.5mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0415*R47M**	0.47	8.0	10.0	17.0	20.0
ETC0415*R68M**	0.68	6.0	8.0	19.0	22.0
ETC0415*1R0M**	1.0	5.0	7.0	40.0	45.0
ETC0415*2R2M**	2.2	3.5	5.0	92.0	100.0
ETC0415*3R3M**	3.3	2.5	3.0	105.0	120.0
ETC0415*4R7M**	4.7	2.0	2.5	120.0	140.0
ETC0415*100M**	10.0	0.5	0.8	240.0	260.0

### Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

### ETC0420

Series	Standard Values - Case Size 0420 (4.0 x 4.5 x 2.0mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0420*R10M**	0.10	12.0	23.0	3.5	4.5
ETC0420*R22M**	0.22	11.0	18.0	5.0	7.0
ETC0420*R33M**	0.33	8.0	15.0	8.2	10.5
ETC0420*R47M**	0.47	7.0	9.5	9.5	14.0
ETC0420*R56M**	0.56	6.5	9.0	12.0	18.0
ETC0420*R68M**	0.68	6.0	8.0	15.0	20.0
ETC0420*1R0M**	1.0	4.5	7.0	25.0	30.0
ETC0420*1R5M**	1.5	4.0	6.0	33.0	36.0
ETC0420*2R2M**	2.2	3.0	5.0	50.0	58.0
ETC0420*3R3M**	3.3	2.5	3.0	83.0	87.0
ETC0420*4R7M**	4.7	2.2	3.0	115.0	140.0
ETC0420*6R8M**	6.8	2.4	2.5	130.0	175.0
ETC0420*100M**	10.0	1.5	1.8	170.0	200.0

### Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

**ETC0515**

Series	Standard Values - Case Size 0515 (5.3 x 5.5 x 1.5mm)				
	INDUCTANCE ( UH )	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0515*R22M**	0.22	13.0	16.0	5.1	7.0
ETC0515*R47M**	0.47	8.0	12.0	12.0	16.0
ETC0515*R68M**	0.68	7.0	9.0	14.0	20.0
ETC0515*1R0M**	1.0	6.0	8.0	18.0	23.0
ETC0515*2R2M**	2.2	4.0	5.0	56.0	65.0
ETC0515*3R3M**	3.3	3.0	4.0	75.0	90.0
ETC0515*4R7M**	4.7	2.5	3.5	110.0	135.0

**Notes:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

**ETC0520**

Series	Standard Values - Case Size 0520 (5.3 x 5.5 x 2.0mm)				
	INDUCTANCE ( UH )	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0520*R22M**	0.22	11.0	16.5	4.6	6.0
ETC0520*R33M**	0.33	10.0	15.0	7.5	9.0
ETC0520*R47M**	0.47	9.0	12.0	8.2	10.0
ETC0520*R68M**	0.68	7.0	11.0	12.5	16.0
ETC0520*1R0M**	1.0	7.0	8.0	17.0	19.2
ETC0520*1R5M**	1.5	5.0	7.0	21.0	28.0
ETC0520*2R2M**	2.2	4.0	6.0	31.0	45.0
ETC0520*3R3M**	3.3	3.5	5.0	58.0	70.0
ETC0520*4R7M**	4.7	3.0	3.5	66.0	85.0
ETC0520*6R8M**	6.8	2.0	3.0	95.0	100.0
ETC0520*100M**	10.0	1.8	2.5	170.0	190.0

**Notes:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC0530

Series	Standard Values - Case Size 0530 (5.3 x 5.5 x 3.0mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0530*R22M**	0.22	14.0	17.0	4.0	5.0
ETC0530*R47M**	0.47	10.0	13.0	8.0	11.0
ETC0530*R68M**	0.68	9.0	12.0	9.0	12.0
ETC0530*1R0M**	1.0	7.0	11.0	14.0	16.0
ETC0530*1R5M**	1.5	5.5	10.0	17.0	22.0
ETC0530*2R2M**	2.2	5.0	9.0	27.0	30.0
ETC0530*3R3M**	3.3	4.5	7.0	33.0	38.0
ETC0530*4R7M**	4.7	4.0	5.0	45.0	60.0
ETC0530*6R8M**	6.8	2.5	3.5	77.0	90.0
ETC0530*100M**	10.0	2.0	3.0	110.0	130.0
ETC0530*150M**	15.0	1.8	2.0	145.0	165.0
ETC0530*220M**	22.0	1.5	1.5	200.0	230.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC0618

Series	Standard Values - Case Size 0618 (6.6 x 7.6 x 1.8mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0618*R10M**	0.1	18.0	35.0	2.5	3.5
ETC0618*R22M**	0.22	14.0	27.0	3.8	5.2
ETC0618*R33M**	0.33	12.0	22.0	5.6	6.8
ETC0618*R47M**	0.47	11.0	18.0	7.2	8.4
ETC0618*R68M**	0.68	9.0	17.0	9.5	12.0
ETC0618*1R0M**	1.0	7.0	11.0	17.0	22.0
ETC0618*1R5M**	1.5	6.5	10.0	23.0	30.0
ETC0618*2R2M**	2.2	6.0	9.0	31.0	36.0
ETC0618*3R3M**	3.3	4.0	8.0	65.0	70.0
ETC0618*4R7M**	4.7	3.5	5.0	73.0	85.0
ETC0618*6R8M**	6.8	2.8	3.5	100.0	110.0
ETC0618*100M**	10.0	2.3	2.5	115.0	150.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

**ETC0620**

Series	Standard Values - Case Size 0620 (6.6 x 7.6 x 2.0mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0620*R10M**	0.1	18.0	35.0	2.5	3.5
ETC0620*R22M**	0.22	14.0	27.0	3.8	5.2
ETC0620*R33M**	0.33	12.0	22.0	5.6	6.8
ETC0620*R47M**	0.47	11.0	18.0	7.2	8.4
ETC0620*R68M**	0.68	9.0	17.0	9.5	12.0
ETC0620*1R0M**	1.0	7.0	11.0	17.0	22.0
ETC0620*1R5M**	1.5	6.5	10.0	23.0	30.0
ETC0620*2R2M**	2.2	6.0	9.0	31.0	36.0
ETC0620*3R3M**	3.3	4.0	8.0	65.0	70.0
ETC0620*4R7M**	4.7	3.5	5.0	73.0	85.0
ETC0620*6R8M**	6.8	2.8	3.5	100.0	110.0
ETC0620*100M**	10.0	2.3	2.5	115.0	150.0

**Notes:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC0624

Series	Standard Values - Case Size 0620 (6.6 x 7.6 x 2.4mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0624*R22M**	0.22	20.0	34.0	2.2	2.8
ETC0624*R33M**	0.33	18.0	24.0	3.0	4.1
ETC0624*R47M**	0.47	15.0	21.0	5.6	6.8
ETC0624*R68M**	0.68	9.0	20.0	7.0	8.0
ETC0624*1R0M**	1.0	8.0	13.0	9.0	12.0
ETC0624*1R5M**	1.5	7.0	12.0	15.0	20.0
ETC0624*2R2M**	2.2	6.0	11.0	22.0	28.0
ETC0624*3R3M**	3.3	5.5	8.5	25.0	30.0
ETC0624*4R7M**	4.7	5.0	8.0	55.0	65.0
ETC0624*6R8M**	6.8	3.0	5.0	80.0	90.0
ETC0624*100M**	10.0	3.0	4.0	100.0	125.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC0630

Series	Standard Values - Case Size 0620 (6.6 x 7.6 x 3.0mm)				
	INDUCTANCE ( UH )	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0630*R10M**	0.1	32.5	60.0	1.2	1.7
ETC0630*R15M**	0.15	30.0	40.0	2.0	2.5
ETC0630*R22M**	0.22	23.0	34.0	2.7	3.5
ETC0630*R33M**	0.33	21.0	25.0	3.2	3.9
ETC0630*R47M**	0.47	17.5	25.0	3.7	4.5
ETC0630*R68M**	0.68	14.0	23.0	4.8	5.5
ETC0630*R82M**	0.82	13.0	20.0	6.8	7.0
ETC0630*1R0M**	1.0	11.0	16.0	7.5	9.0
ETC0630*1R5M**	1.5	10.0	14.0	11.0	15.0
ETC0630*2R2M**	2.2	8.0	12.0	15.0	20.0
ETC0630*3R3M**	3.3	6.0	10.0	25.0	30.0
ETC0630*4R7M**	4.7	5.5	9.0	37.0	40.0
ETC0630*5R6M**	5.6	5.0	8.0	50.0	60.0
ETC0630*6R8M**	6.8	5.0	7.0	50.0	60.0
ETC0630*8R2M**	8.2	4.0	6.0	75.0	80.0
ETC0630*100M**	10.0	3.0	5.5	78.0	90.0
ETC0630*150M**	15.0	2.8	4.0	110.0	130.0
ETC0630*220M**	22.0	2.5	3.5	127.0	150.0
ETC0630*330M**	33.0	1.8	2.0	218.0	245.0
ETC0630*470M**	47.0	0.8	1.8	255.0	290.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.



## ETC0640

Series	Standard Values - Case Size 0620 (6.6 x 7.6 x 4.0mm)				
	INDUCTANCE ( UH )	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0640*R22M**	0.22	23.0	35.0	2.5	3.0
ETC0640*R33M**	0.33	21.0	25.0	2.8	3.5
ETC0640*R47M**	0.47	17.0	23.0	3.7	4.5
ETC0640*R68M**	0.68	14.0	20.0	4.2	5.5
ETC0640*1R0M**	1.0	10.0	18.0	5.5	7.0
ETC0640*1R5M**	1.5	9.0	15.0	9.0	12.0
ETC0640*2R2M**	2.2	8.0	12.0	10.0	13.0
ETC0640*3R3M**	3.3	6.5	11.0	17.0	20.0
ETC0640*4R7M**	4.7	6.0	9.0	22.0	25.0
ETC0640*6R8M**	6.8	5.0	8.0	41.0	45.0
ETC0640*8R2M**	8.2	4.0	7.0	46.0	52.0
ETC0640*100M**	10.0	3.5	6.0	53.0	65.0
ETC0640*150M**	15.0	3.0	4.5	70.0	80.0
ETC0640*220M**	22.0	2.5	4.0	100.0	120.0
ETC0640*330M**	33.0	2.0	3.0	165.0	200.0
ETC0640*470M**	47.0	1.5	2.0	220.0	260.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

**ETC0650**

Series	Standard Values - Case Size 0620 (6.6 x 7.6 x 5.0mm)				
	INDUCTANCE ( UH )	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC0650*R15M**	0.15	36.0	45.0	0.8	1.0
ETC0650*R22M**	0.22	25.0	45.0	2.3	3.0
ETC0650*R33M**	0.33	23.0	35.0	2.8	3.5
ETC0650*R47M**	0.47	18.0	24.0	3.5	4.5
ETC0650*R68M**	0.68	14.0	21.0	4.2	5.5
ETC0650*R82M**	0.82	14.0	20.0	5.5	7.0
ETC0650*1R0M**	1.0	12.0	18.0	6.5	7.5
ETC0650*1R5M**	1.5	10.0	15.0	7.0	8.5
ETC0650*2R2M**	2.2	8.0	12.0	10.5	13.0
ETC0650*3R3M**	3.3	7.0	11.0	14.0	20.0
ETC0650*4R7M**	4.7	7.0	10.0	21.0	25.0
ETC0650*6R8M**	6.8	5.0	7.0	24.0	28.0
ETC0650*8R2M**	8.2	4.5	8.0	37.0	45.0
ETC0650*100M**	10.0	4.0	7.0	45.0	60.0
ETC0650*150M**	15.0	3.5	5.0	62.0	70.0
ETC0650*220M**	22.0	3.0	4.0	80.0	90.0
ETC0650*330M**	33.0	2.5	3.0	180.0	220.0
ETC0650*470M**	47.0	2.0	2.8	195.0	240.0
ETC0650*560M**	56.0	1.5	2.5	210.0	260.0
ETC0650*680M**	68.0	1.3	1.8	265.0	310.0
ETC0650*101M**	100.0	0.8	1.6	495.0	550.0

**Notes:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

**ETC1030**

Series	Standard Values - Case Size 1030 (10.8 x 11.8x 3.0mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC1030*R36M**	0.36	23.0	35.0	1.4	1.6
ETC1030*R56M**	0.56	18.0	24.0	1.5	1.7
ETC1030*R68M**	0.68	17.0	23.0	2.6	3.2
ETC1030*1R0M**	1.0	13.0	18.0	5.0	7.0
ETC1030*1R5M**	1.5	10.0	16.0	7.0	9.0
ETC1030*2R2M**	2.2	9.0	14.0	10.0	12.0
ETC1030*3R3M**	3.3	7.0	9.0	15.0	20.0
ETC1030*4R7M**	4.7	6.0	8.5	20.0	25.0
ETC1030*6R8M**	6.8	5.0	7.0	33.0	40.0
ETC1030*8R2M**	8.2	4.0	6.0	47.0	55.0
ETC1030*100M**	10.0	4.0	5.0	50.0	56.0
ETC1030*150M**	15.0	3.5	4.0	65.0	70.0

**Notes:**

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately Δt of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC1040

Series	Standard Values - Case Size 1040 (10.8 x 11.8x 4.0mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC1040*R22M**	0.22	30.0	60.0	0.8	1.1
ETC1040*R36M**	0.36	28.0	50.0	1.1	1.4
ETC1040*R47M**	0.47	25.0	35.0	1.2	1.5
ETC1040*R56M**	0.56	23.0	33.0	1.5	1.7
ETC1040*R68M**	0.68	22.0	32.0	1.8	2.3
ETC1040*R82M**	0.82	20.0	30.0	2.3	2.5
ETC1040*1R0M**	1.0	18.0	28.0	3.2	4.1
ETC1040*1R5M**	1.5	16.0	25.0	4.8	5.8
ETC1040*2R2M**	2.2	12.0	24.0	7.2	9.0
ETC1040*3R3M**	3.3	11.0	16.0	10.0	13.5
ETC1040*4R7M**	4.7	8.0	13.0	13.5	16.5
ETC1040*5R6M**	5.6	7.0	12.0	18.0	22.0
ETC1040*6R8M**	6.8	6.0	11.0	23.0	28.0
ETC1040*8R2M**	8.2	5.5	10.0	27.0	30.0
ETC1040*100M**	10.0	5.0	9.0	31.0	36.5
ETC1040*150M**	15.0	4.5	7.0	39.0	45.0
ETC1040*220M**	22.0	4.0	6.0	55.0	60.0
ETC1040*330M**	33.0	3.5	5.0	127.0	145.0
ETC1040*470M**	47.0	3.0	4.0	127.0	145.0
ETC1040*680M**	68.0	2.5	3.5	200.0	215.0
ETC1040*101M**	100.0	2.0	3.0	242.0	280.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC1050

Series	Standard Values - Case Size 1050 (10.8 x 11.8x 5.0mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC1050*R36M**	0.36	38.0	55.0	0.9	1.1
ETC1050*R47M**	0.47	36.0	50.0	1.1	1.3
ETC1050*R68M**	0.68	25.0	40.0	1.6	2.0
ETC1050*R82M**	0.82	20.0	34.0	2.0	2.5
ETC1050*1R0M**	1.0	19.0	30.0	2.3	2.7
ETC1050*1R5M**	1.5	18.0	25.0	3.9	4.6
ETC1050*2R2M**	2.2	17.0	20.0	4.7	5.5
ETC1050*3R3M**	3.3	10.0	16.0	5.8	7.0
ETC1050*4R7M**	4.7	9.0	15.0	10.0	13.0
ETC1050*6R8M**	6.8	8.0	13.0	17.0	22.0
ETC1050*8R2M**	8.2	7.0	11.0	22.0	25.0
ETC1050*100M**	10.0	6.0	10.0	23.0	28.0
ETC1050*150M**	15.0	5.0	8.0	39.0	45.0
ETC1050*220M**	22.0	4.5	7.0	55.0	60.0
ETC1050*330M**	33.0	4.0	6.0	90.0	100.0
ETC1050*470M**	47.0	3.5	5.0	127.0	145.0
ETC1050*680M**	68.0	3.0	5.0	215.0	258.0
ETC1050*101M**	100.0	2.5	4.0	230.0	270.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC1335

Series	Standard Values - Case Size 1235 (12.8 x 13.5x 3.5mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC1335*R22M**	0.22	35.0	60.0	0.9	1.2
ETC1335*R33M**	0.33	32.0	55.0	1.1	1.4
ETC1335*R47M**	0.47	30.0	50.0	1.3	1.5
ETC1335*R68M**	0.68	28.0	49.0	2.1	2.5
ETC1335*1R0M**	1.0	20.0	30.0	3.1	3.5
ETC1335*1R5M**	1.5	15.0	24.0	4.5	6.0
ETC1335*2R2M**	2.2	14.0	20.0	7.0	8.0
ETC1335*3R3M**	3.3	12.0	16.0	10.0	12.0
ETC1335*4R7M**	4.7	10.0	14.0	14.0	16.0
ETC1335*6R8M**	6.8	8.0	12.0	21.0	25.0
ETC1335*100M**	10.0	6.0	10.0	28.0	35.0
ETC1335*150M**	15.0	4.0	7.0	58.0	70.0
ETC1335*220M**	22.0	3.0	6.0	95.0	110.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC1340

Series	Standard Values - Case Size 1240 (12.8 x 13.5x 4.0mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC1340*R22M**	0.22	40.0	60.0	0.5	0.7
ETC1340*R33M**	0.33	38.0	55.0	0.7	0.9
ETC1340*R47M**	0.47	31.0	52.0	1.3	1.5
ETC1340*R68M**	0.68	28.0	49.0	2.1	2.5
ETC1340*1R0M**	1.0	20.0	38.0	2.9	3.5
ETC1340*1R5M**	1.5	16.0	30.0	3.6	4.5
ETC1340*2R2M**	2.2	15.0	22.0	6.5	8.0
ETC1340*3R3M**	3.3	14.0	20.0	8.7	10.0
ETC1340*4R7M**	4.7	9.0	15.0	12.0	14.0
ETC1340*5R6M**	5.6	8.0	14.0	15.0	17.0
ETC1340*6R8M**	6.8	7.0	12.0	17.0	22.0
ETC1340*100M**	10.0	6.0	10.0	28.0	35.0
ETC1340*150M**	15.0	5.0	9.0	55.0	65.0
ETC1340*220M**	22.0	4.0	7.0	69.0	80.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC1350

Series	Standard Values - Case Size 1250 (12.8 x 13.5x 5.0mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC1350*R22M**	0.22	40.0	60.0	0.5	0.7
ETC1350*R36M**	0.36	38.0	55.0	0.7	0.9
ETC1350*R47M**	0.47	31.0	54.0	1.1	1.3
ETC1350*R68M**	0.68	30.0	51.0	1.3	1.5
ETC1350*R82M**	0.82	28.0	50.0	1.7	2.2
ETC1350*1R0M**	1.0	25.0	50.0	2.1	2.5
ETC1350*1R5M**	1.5	21.0	48.0	3.1	4.1
ETC1350*2R2M**	2.2	16.0	25.0	3.3	4.5
ETC1350*3R3M**	3.3	15.0	22.0	7.5	9.0
ETC1350*4R7M**	4.7	12.0	20.0	10.0	12.0
ETC1350*6R8M**	6.8	11.0	18.0	15.0	18.0
ETC1350*8R2M**	8.2	10.0	16.0	19.0	23.0
ETC1350*100M**	10.0	7.0	12.0	23.0	25.5
ETC1250*150M**	15.0	6.0	9.0	26.0	30.0
ETC1350*220M**	22.0	4.0	7.0	30.0	35.0
ETC1350*330M**	33.0	3.0	6.0	52.0	60.0
ETC1350*470M**	47.0	2.5	5.0	85.0	100.0
ETC1350*680M**	68.0	2.0	3.5	154.0	180.0
ETC1350*101M**	100.0	2.0	3.0	243.0	255.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.



## ETC1365

Series	Standard Values - Case Size 1265 (12.8 x 13.5x 6.5mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC1365*R22M**	0.22	45.0	80.0	0.6	0.8
ETC1365*R36M**	0.36	38.0	70.0	0.8	1.0
ETC1365*R47M**	0.47	35.0	60.0	1.1	1.3
ETC1365*R68M**	0.68	30.0	54.0	1.2	1.5
ETC1365*R82M**	0.82	26.0	52.0	1.6	2.0
ETC1365*1R0M**	1.0	25.0	50.0	2.1	2.5
ETC1365*1R5M**	1.5	21.0	48.0	3.1	4.1
ETC1365*2R2M**	2.2	18.0	40.0	3.5	4.5
ETC1365*3R3M**	3.3	16.0	23.0	5.5	7.0
ETC1365*4R7M**	4.7	14.0	21.0	8.5	11.0
ETC1365*6R8M**	6.8	11.5	18.0	11.0	14.0
ETC1365*8R2M**	8.2	10.0	16.0	16.0	20.0
ETC1365*100M**	10.0	10.0	15.5	18.0	22.0
ETC1365*150M**	15.0	7.0	12.0	25.0	30.0
ETC1365*220M**	22.0	6.0	10.0	30.0	36.0
ETC1365*330M**	33.0	5.0	9.0	45.0	55.0
ETC1365*470M**	47.0	4.0	6.0	62.0	75.0
ETC1365*680M**	68.0	3.0	5.0	96.0	115.0
ETC1365*820M**	82.0	2.5	4.5	110.0	130.0
ETC1365*101M**	100.0	2.0	3.5	125.0	145.0
ETC1365*151M**	150.0	1.6	2.5	245.0	280.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ETC1770

Series	Standard Values - Case Size 1770 (17.5 x 19.0x 7.0mm)				
	INDUCTANCE ( UH)	HEAT RATING CURRENT(I dc) DC AMPS1 (Typ.)	SATURATION CURRENT(I sat) DC AMPS2 (Typ.)	RDC I sat ( mΩ )	
				TYP.	MAX.
ETC1770*R22M**	0.22	60.0	100.0	0.55	0.7
ETC1770*R33M**	0.33	55.0	90.0	0.7	0.8
ETC1770*R47M**	0.47	50.0	80.0	0.8	1.0
ETC1770*R56M**	0.56	46.0	70.0	0.9	1.15
ETC1770*R82M**	0.82	42.0	60.0	1.17	1.3
ETC1770*1R0M**	1.0	38.0	50.0	1.45	1.7
ETC1770*1R5M**	1.5	35.0	45.0	1.8	2.15
ETC1770*2R2M**	2.2	25.0	34.0	2.15	2.6
ETC1770*3R3M**	3.3	17.0	24.0	2.61	3.5
ETC1770*4R7M**	4.7	15.0	21.0	3.38	5.0
ETC1770*6R8M**	6.8	15.0	18.0	5.53	7.0
ETC1770*8R2M**	8.2	12.0	18.0	7.0	9.0
ETC1770*100M**	10.0	11.0	17.0	8.0	10.0
ETC1770*150M**	15.0	9.0	12.0	12.0	15.0
ETC1770*220M**	22.0	7.0	9.5	19.18	25.0
ETC1770*330M**	33.0	6.5	9.0	30.65	35.0
ETC1770*470M**	47.0	5.5	7.5	36.75	40.0
ETC1770*680M**	68.0	4.0	5.0	61.0	80.0
ETC1770*820M**	82.0	4.0	4.5	95.55	105.0
ETC1770*101M**	100.0	3.0	4.0	111.0	120.0

## Notes:

1. Test frequency : L : 100KHz /1.0V.
2. All test data referenced to 25°C ambient.
3. Heat Rated Current (I rms) will cause the coil temperature rise approximately  $\Delta t$  of 40°C (keep 1min.).
4. Saturation Current (I sat) will cause L0 to drop 30% typical. (keep quickly).
5. Special inquiries besides the above common used types can be met on your requirement.

## ■ Reliability Testing

Item	Performance	Test Condition
Operating temperature	-55~+125°C	
Storage temperature	-10~+40°C, 50~60%RH (Product without taping)	

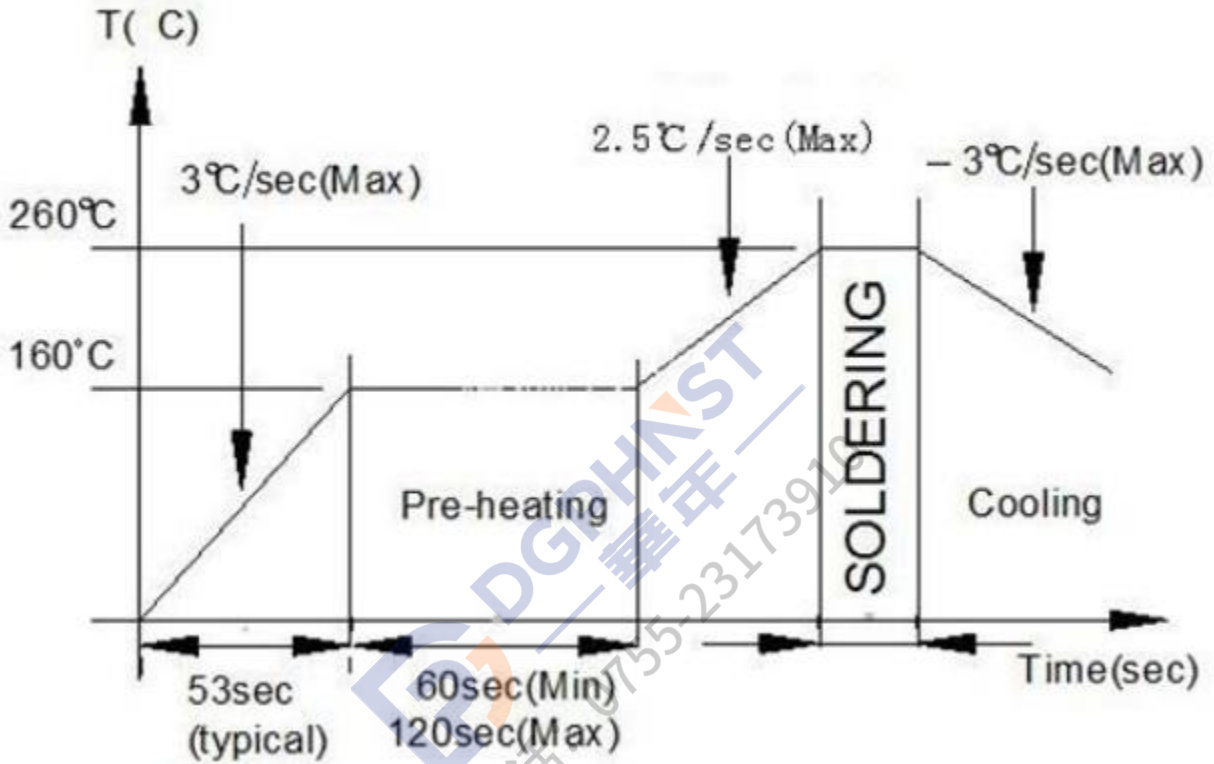
## Electrical Performance Test

Inductance	Refer to standard electrical characteristics	HP4284A, CH11025, CH3302, CH1320, CH1320S
DCR	list.	CH16502, Agilent33420A Micro-Ohm Meter.
Saturation Current (Isat)	$\Delta L$ 30% typical.	Saturation DC Current (Isat) will cause L0 to drop $\Delta L$ (%)(keep quickly).
Heat Rated Current (Irms)	Approximately $\Delta T \leq 40^\circ\text{C}$	Heat Rated Current (Irms) will cause the coil temperature rise $\Delta T$ (°C) without core loss.

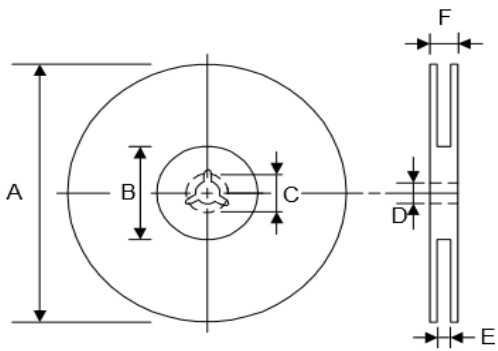
## Reliability Test

High Temperature Exposure Test		Temperature:125±2°C. Duration:1000±12hrs.
Low Temperature Life Test Low Temperature Life Test		Temperature:-40±2°C
Biased Humidity Test		Humidity:85±3%RH. Temperature:85±2°C. Duration:1000±12hrs.
Thermal shock test	Electric specifications should be satisfied	Condition for 1 cycle Step1:-40+0 / -2°C 15±1 min. Step2:Room temperature within≤0.2 min. Step3:+125+2 / -0°C 15±1min.Number of cycles:300
Vibration test		Frequency: 10-2000-10Hz for 20min. Amplitude: Parts mounted within 2" from any secure point. Directions and times: X, Y,Z directions for 20 min.
Reflow test		Pre-heat: 150±5°C Duration: 5minutes Temperature: 260±5°C, 20~40 (IPC/JEDEC J STD-020C)
Solder test	Terminals should be covered by over 95% solder on visual inspection	After dip into flux, dip into solder 235±5°C, 4±1seconds Flux 、 solder for leadfree (ANSI /J-STD-002C Method B)

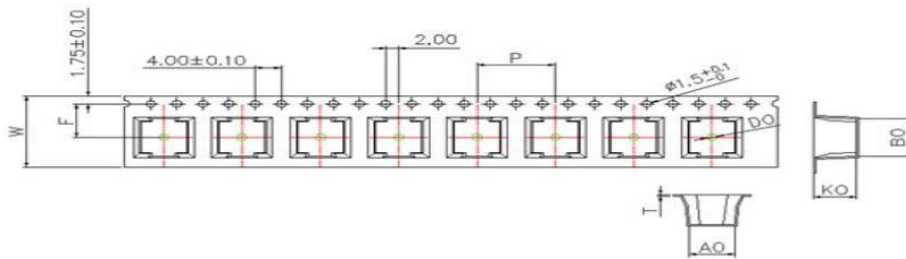
■ Soldering Condition Recommended



■ Reel Specifications



TYPE	A	B	C	D	E	F
12mm	330	100	21.0±0.8	13 $\frac{+0.5}{-0.2}$	16±0.3	18.4
16mm	330	100	21.0±0.8	13 $\frac{+0.5}{-0.2}$	16±0.3	22.4
24mm	330	100	21.0±0.8	13 $\frac{+0.5}{-0.2}$	24±0.3	30.4
32mm	330	100	21.0±0.8	13.0±0.1	32.0±0.5	36.0±2.0



TYPE	Q'TY (PCS)	A0	B0	KO	W	P	T
ETC0415	3000	5.2±0.1	4.4±0.1	1.6±0.1	12.0±0.3	8.0±0.1	0.30±0.05
ETC0420	3000	5.2±0.1	4.4±0.1	2.2±0.1	12.0±0.3	8.0±0.1	0.30±0.05
ETC0515	2500/3000	6.0±0.1	5.4±0.1	1.7±0.2	12.0±0.3	8.0±0.1	0.30±0.05
ETC0520	2500/3000	6.0±0.1	5.4±0.1	2.2±0.1	12.0±0.3	8.0±0.1	0.30±0.05
ETC0530	2000/2500	6.0±0.1	5.4±0.1	3.2±0.1	12.0±0.3	8.0±0.1	0.30±0.05
ETC0618	2000	7.0±0.1	7.8±0.1	2.2±0.1	16.0±0.3	12.0±0.1	0.35±0.05
ETC0620	2000	7.0±0.1	7.8±0.1	2.2±0.1	16.0±0.3	12.0±0.1	0.35±0.05
ETC0624	1500	7.0±0.1	7.8±0.1	2.6±0.1	16.0±0.3	12.0±0.1	0.35±0.05
ETC0630	1000	7.0±0.1	7.8±0.1	3.2±0.1	16.0±0.3	12.0±0.1	0.35±0.05
ETC0640	1000	7.0±0.1	7.8±0.1	4.2±0.1	16.0±0.3	12.0±0.1	0.35±0.05
ETC0650	1000	7.0±0.1	7.8±0.1	5.2±0.1	16.0±0.3	12.0±0.1	0.35±0.05
ETC1030	1000	10.7±0.1	12.0±0.1	3.2±0.1	24.0±0.3	16.0±0.1	0.35±0.05
ETC1040	1000	10.7±0.1	12.0±0.1	4.5±0.1	24.0±0.3	16.0±0.1	0.35±0.05
ETC1050	500/800	10.7±0.1	12.0±0.1	5.2±0.1	24.0±0.3	16.0±0.1	0.35±0.05
ETC1235	800	13.3±0.3	14.8±0.3	3.8±0.1	24.0±0.3	16.0±0.1	0.35±0.05
ETC1240	800	13.3±0.3	14.8±0.3	4.3±0.1	24.0±0.3	16.0±0.1	0.35±0.05
ETC1250	500	13.3±0.3	14.8±0.3	5.3±0.1	24.0±0.3	16.0±0.1	0.35±0.05
ETC1265	500	13.3±0.3	14.8±0.3	6.8±0.1	24.0±0.3	16.0±0.1	0.35±0.05
ETC1770	400	17.1±0.2	17.5±0.2	7.2±0.1	32.0±0.5	24.0±0.1	0.40±0.05