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# **(TPSPA) Low-Profile High-Current Power Inductors**

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## ▶ Product Introduction

### Token Power Inductor Enhances Low-Profile High-Current With Up To 1MHz High Frequency.

#### Features :

- Good magnetic shielding.
- Low Profile: 1.2mm ~ 7.0mm.
- High current (rated current): 1A ~ 42A.
- High frequency (up to 1MHz).

#### Applications :

- DC to DC converter.
- Power distribution system or VRM application.
- Thin board power supply switching module.
- Notebook computer, PC display card, VGA module.

Token's (TPSPA) inductor features high current and low direct current resistance (DCR) in a rugged surface-mount package. Available in six industry-standard footprint (4.2 mm x 4.4 mm), (5.2 mm x 5.4 mm), (6.6 mm x 7.15 mm), (10.1 mm x 11.15 mm), (12.6 mm x 13.65 mm), and (17.15 mm x 17.15 mm) with a profile from 1.2 mm to 7.0 mm maximum, the TPSPA series inductors use an advanced core material that operating temperature range from -25°C to +125°C, and are said to provide the lowest DCR of any inductor in this size and profile.



These high current inductors are suitable for use in voltage regulator module applications in desktop computers, notebook computers, point-of-load converters, workstations and servers as well as DC-DC applications, and other high-power, high-density, high-ambient temperature applications.

Token (TPSPA) series provides a high peak saturation current and a maximum operating current rating that enables the inductors to handle the high current requirements of microprocessors with significant saturation margin. The series also offers a saturation current range from 2.0A up to 75A, heat rating current from 1.0A to 43A, typical DCR from 0.5mΩ to 300.0mΩ, and maximum DCR from 0.65mΩ to 350mΩ, which results in lower copper losses and maximizes the current rating for higher component performance and system efficiency. The inductance values range from 0.1μH to 150μH.

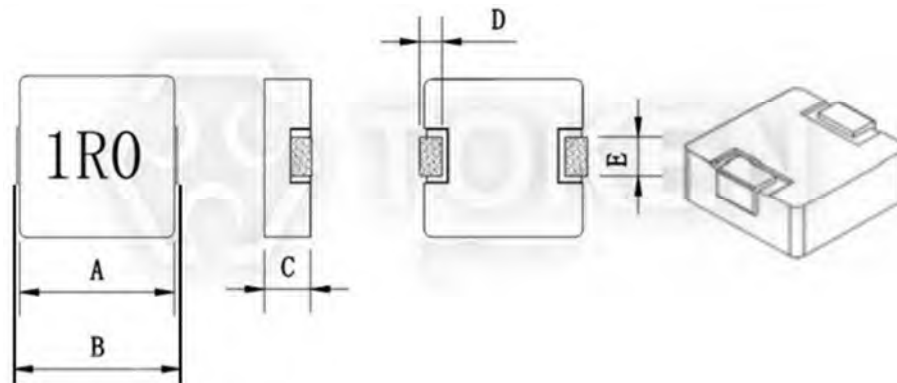
The (TPSPA) inductors are RoHS compliant and meet standard EIA481 requirements. Custom parts are available on request. Token will also produce devices outside these specifications to meet specific customer requirements, please contact our sales or link to Token official website "[SMD Power Inductors](http://www.token.com.tw)" for more information.



## ► Dimensions

### Dimensions & Configurations (TPSPA)

Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
TPSPA0420	4.2 ± 0.25	4.4 ± 0.35	2.0 Max.	0.8 ± 0.3	1.5 ± 0.3
TPSPA0518	5.2 ± 0.25	5.4 ± 0.35	1.8 Max.	1.0 ± 0.3	2.3 ± 0.3
TPSPA0530	5.2 ± 0.25	5.4 ± 0.35	3.0 Max.	1.0 ± 0.3	2.3 ± 0.3
TPSPA0612	6.6 ± 0.25	7.15 ± 0.35	1.2 Max.	1.5 ± 0.3	3.0 ± 0.3
TPSPA0615	6.6 ± 0.25	7.15 ± 0.35	1.5 Max.	1.5 ± 0.3	3.0 ± 0.3
TPSPA0618	6.6 ± 0.25	7.15 ± 0.35	1.8 Max.	1.5 ± 0.3	3.0 ± 0.3
TPSPA0624	6.6 ± 0.25	7.15 ± 0.35	2.4 Max.	1.5 ± 0.3	3.0 ± 0.3
TPSPA0630	6.6 ± 0.25	7.15 ± 0.35	3.0 Max.	1.5 ± 0.3	3.0 ± 0.3
TPSPA0650	6.6 ± 0.25	7.15 ± 0.35	5.0 Max.	1.5 ± 0.3	3.0 ± 0.3
TPSPA1030	10.1 ± 0.25	11.15 ± 0.35	3.0 Max.	2.0 ± 0.5	3.0 ± 0.5
TPSPA1040	10.85 ± 0.35	10.00 ± 0.3	4.0 Max.	3.3 ± 0.5	2.0 ± 0.5
TPSPA1050	10.1 ± 0.25	11.15 ± 0.35	5.0 Max.	2.0 ± 0.5	3.0 ± 0.5
TPSPA1335	12.6 ± 0.2	13.65 ± 0.35	3.5 Max.	2.5 ± 0.5	3.8 ± 0.5
TPSPA1350	12.6 ± 0.2	13.65 ± 0.35	5.0 Max.	2.5 ± 0.5	3.8 ± 0.5
TPSPA1360	12.6 ± 0.2	13.65 ± 0.35	6.0 Max.	2.5 ± 0.5	3.8 ± 0.5
TPSPA1365	12.6 ± 0.2	13.65 ± 0.35	6.5 Max.	2.5 ± 0.5	3.8 ± 0.5
TPSPA1770	17.15 Max.	17.15 ± 0.35	7.0 Max.	2.5 ± 0.5	12.0 ± 0.5



▶ 0420

**Electrical Characteristics (TPSPA0420)**

Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA0420-R10M	0.10	4.0	13.0	27.0
TPSPA0420-R22M	0.22	6.6	9.5	21.0
TPSPA0420-R47M	0.47	14.0	7.0	9.5
TPSPA0420-R56M	0.56	16.0	6.0	8.5
TPSPA0420-R68M	0.68	21.0	5.2	8.0
TPSPA0420-1R0M	1.00	27.0	4.5	7.0
TPSPA0420-1R5M	1.50	42.0	4.0	6.0
TPSPA0420-2R2M	2.20	58.0	3.0	5.0
TPSPA0420-3R3M	3.30	87.0	2.5	4.0
TPSPA0420-4R7M	4.70	104.0	2.2	3.0
TPSPA0420-6R8M	6.80	175.0	2.0	2.5
TPSPA0420-100M	10.00	265.0	1.6	2.2

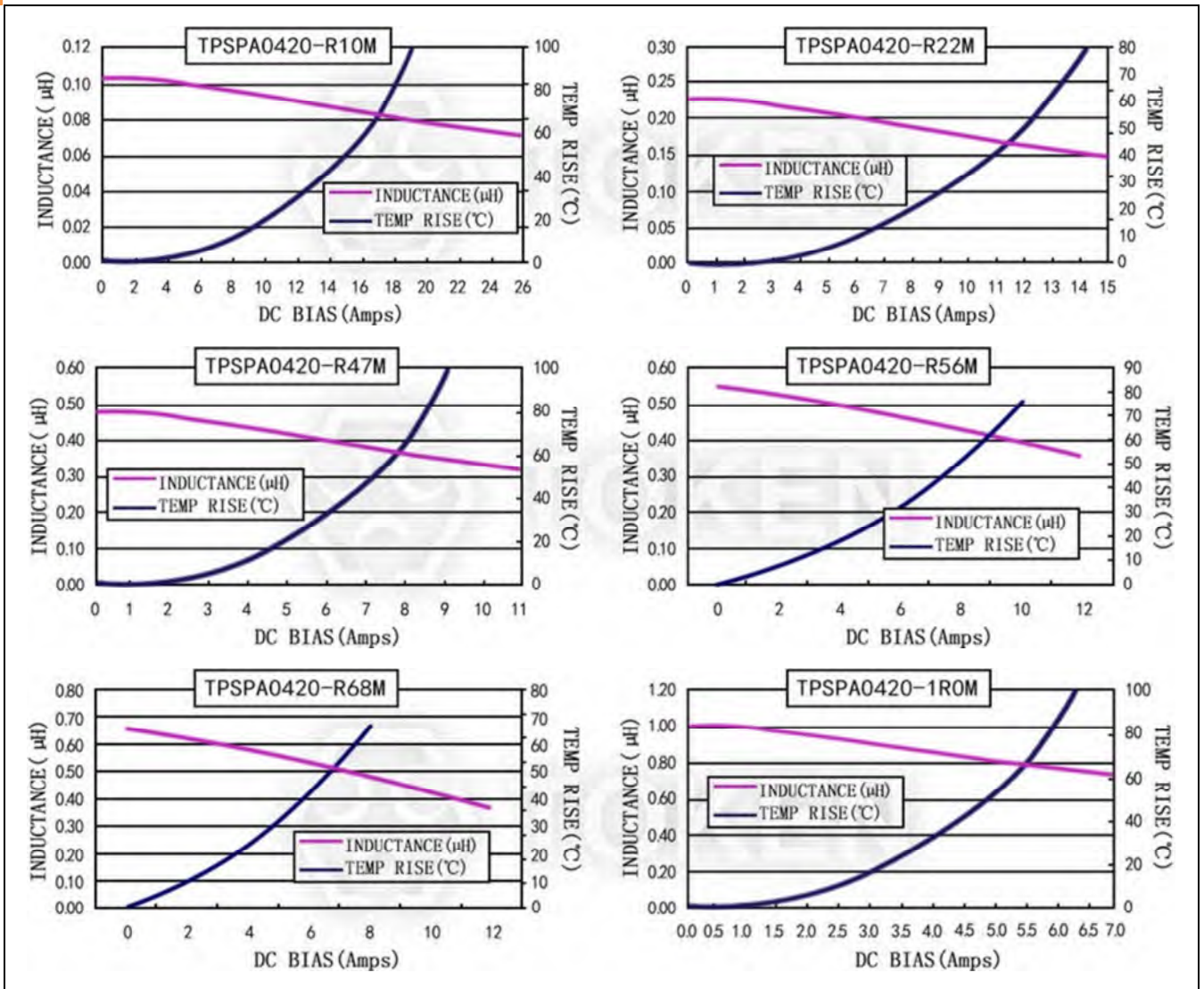
**Note:**

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.

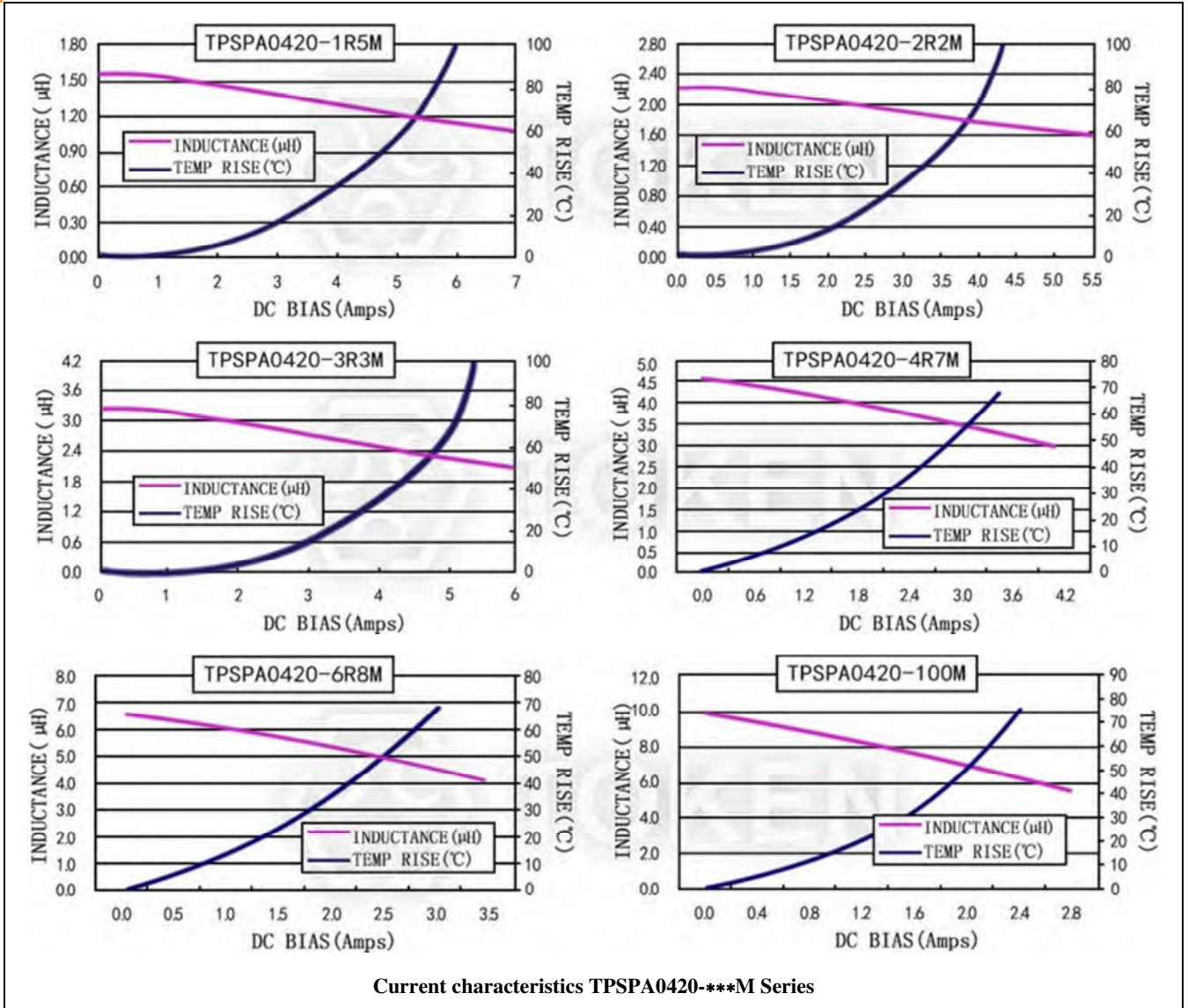




Current characteristics TPSPA0420-\*\*\*M Series



Current characteristics TPSPA0420-\*\*\*M Series



Current characteristics TPSPA0420-\*\*\*M Series

▶ 0518

**Electrical Characteristics (TPSPA0518)**

Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA0518-R33M	0.33	6.8	15.0	17.0
TPSPA0518-R47M	0.47	9.0	10.5	15.5
TPSPA0518-R56M	0.56	10.0	9.5	15.0
TPSPA0518-R68M	0.68	13.0	8.0	14.0
TPSPA0518-R82M	0.82	15.0	8.0	10.0
TPSPA0518-1R0M	1.00	17.0	8.0	9.0
TPSPA0518-1R2M	1.20	20.0	7.5	8.0
TPSPA0518-1R5M	1.50	30.0	6.0	7.0
TPSPA0518-2R2M	2.20	35.0	5.0	6.5
TPSPA0518-3R3M	3.30	58.0	4.5	5.0
TPSPA0518-4R7M	4.70	85.0	3.5	4.0
TPSPA0518-5R6M	5.60	95.0	3.0	3.5
TPSPA0518-6R8M	6.80	120.0	2.8	3.4
TPSPA0518-8R2M	8.20	145.0	2.6	3.1
TPSPA0518-100M	10.00	155.0	2.5	3.0

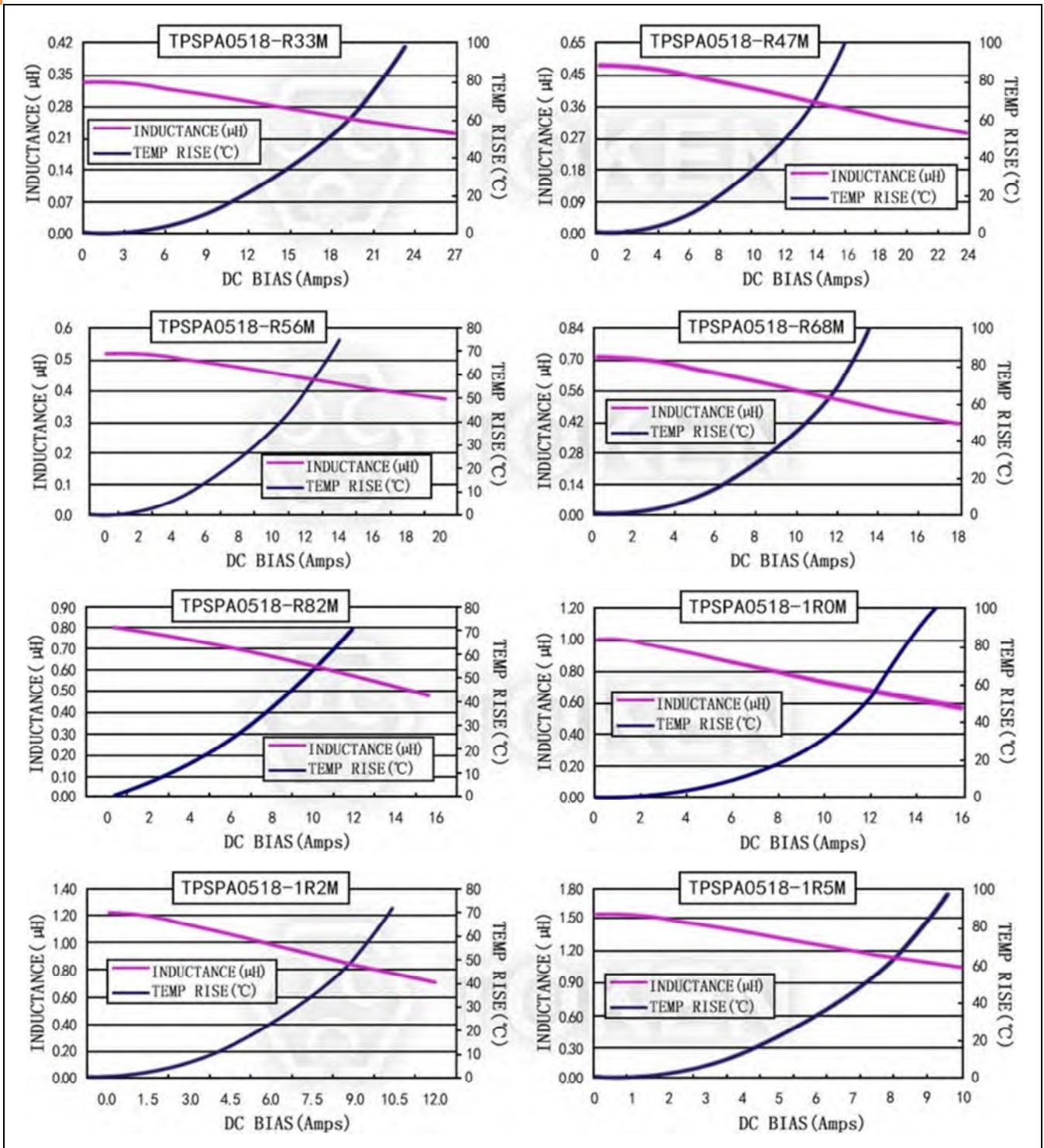
Note:

- Test frequency at 100KHZ / 1.0V.
- I<sub>dc</sub> (I<sub>rms</sub>): Current that causes a 40°C temperature rise from 25°C ambient.
- I<sub>sat</sub>: DC current at which the inductance drops 30% from its value without current.



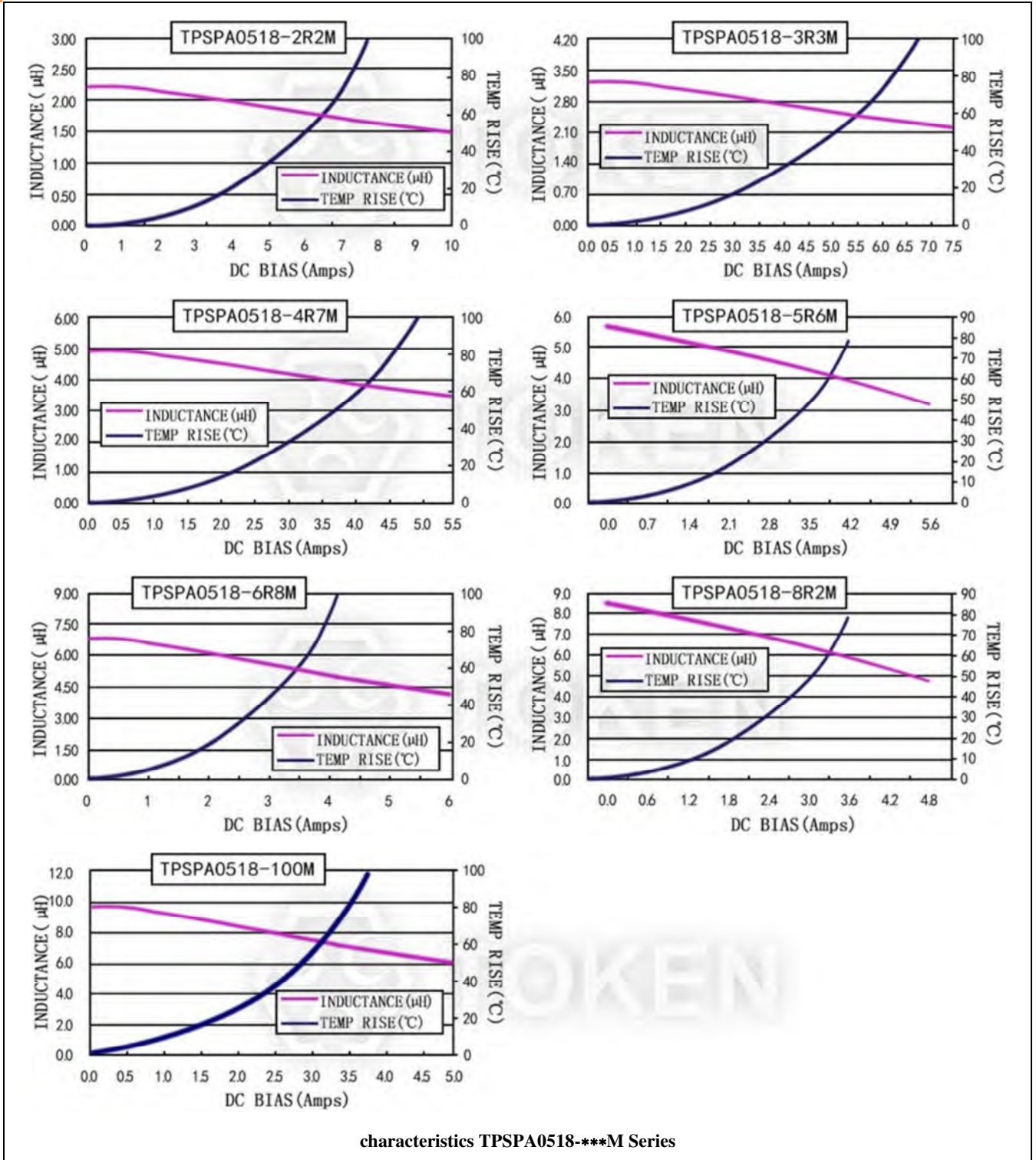


Current characteristics TPSPA0518-\*\*\*M Series





Current characteristics TPSPA0518-\*\*\*M Series



▶ 0530

**Electrical Characteristics (TPSPA0530)**

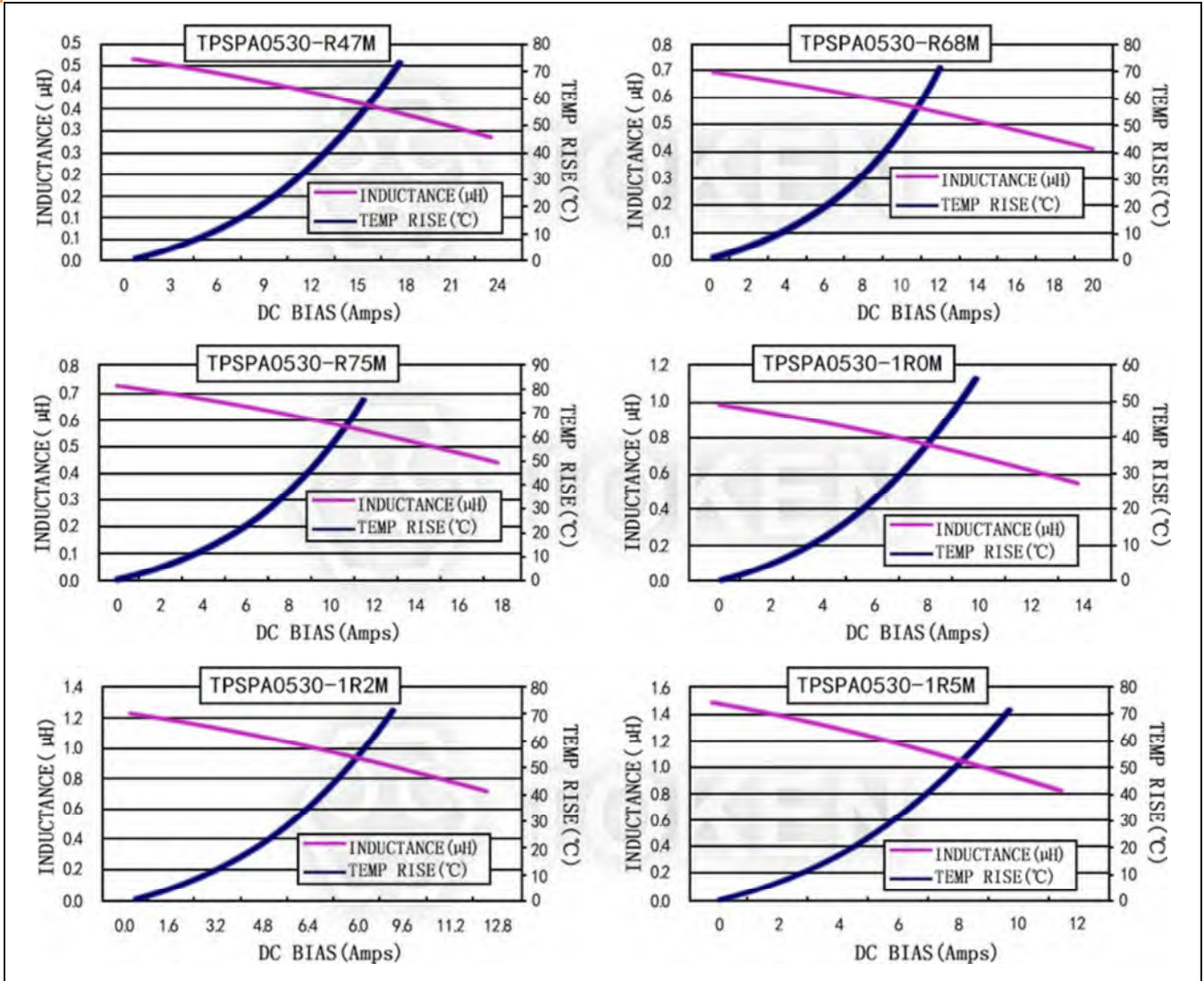
Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA0530-R47M	0.47	7.4	12.0	16.0
TPSPA0530-R68M	0.68	12.0	8.5	14.0
TPSPA0530-R75M	0.75	13.0	8.0	12.0
TPSPA0530-1R0M	1.00	14.0	7.0	9.0
TPSPA0530-1R2M	1.20	16.0	6.5	8.5
TPSPA0530-1R5M	1.50	25.0	6.0	8.2
TPSPA0530-2R2M	2.20	35.0	5.5	7.5
TPSPA0530-3R3M	3.30	38.0	5.0	5.0
TPSPA0530-4R7M	4.70	60.0	4.0	4.2
TPSPA0530-5R6M	5.60	63.0	4.0	4.0
TPSPA0530-6R8M	6.80	76.0	4.0	3.5
TPSPA0530-8R2M	8.20	105.0	3.3	3.0
TPSPA0530-100M	10.00	128.0	2.8	2.7

Note:

- Test frequency at 100KHZ / 1.0V.
- I<sub>dc</sub> (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- I<sub>sat</sub>: DC current at which the inductance drops 30% from its value without current.

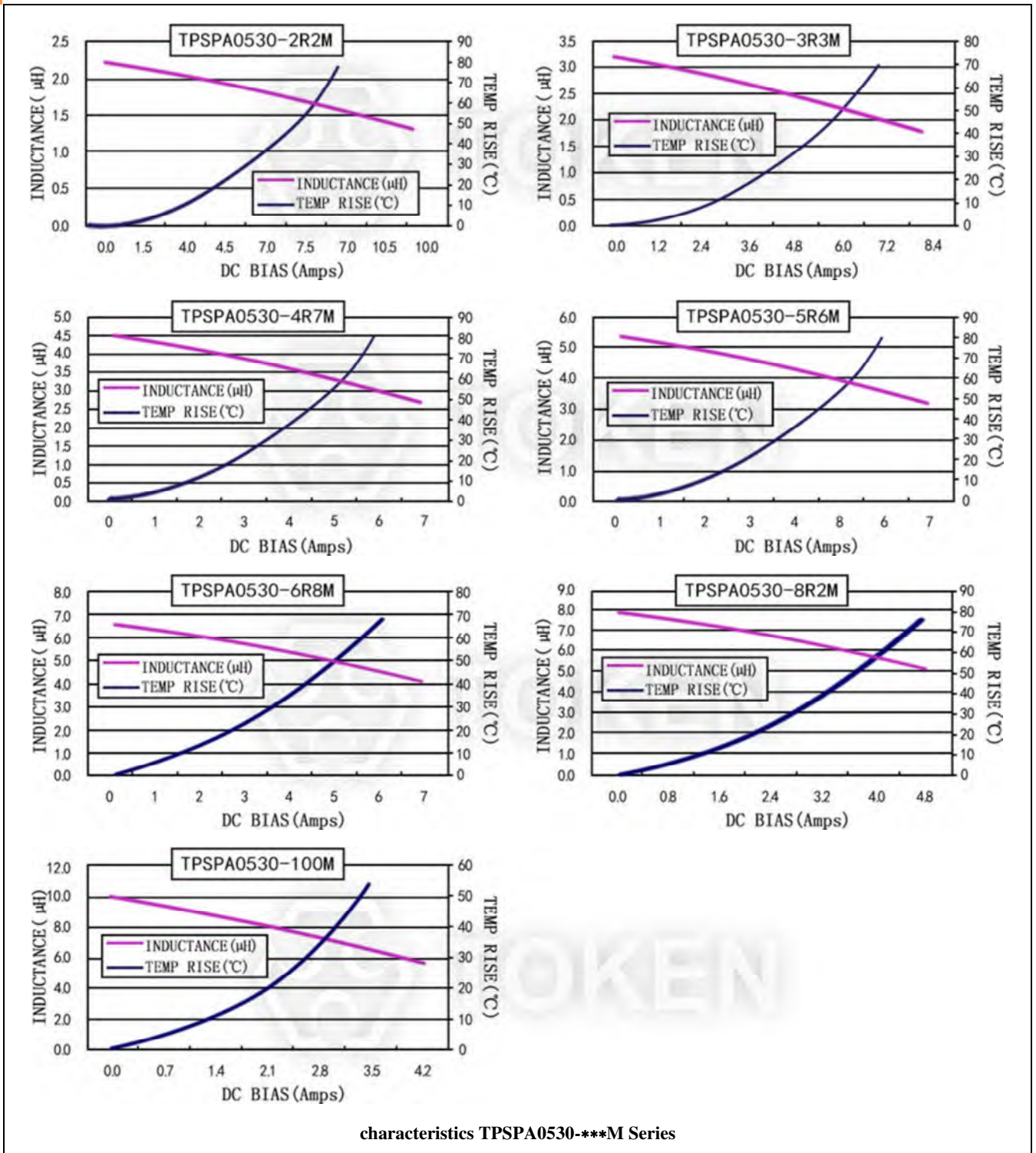


Current characteristics TPSPA0530-\*\*\*M Series





Current characteristics TPSPA0530-\*\*\*M Series





▶ 0612

**Electrical Characteristics (TPSPA0612)**

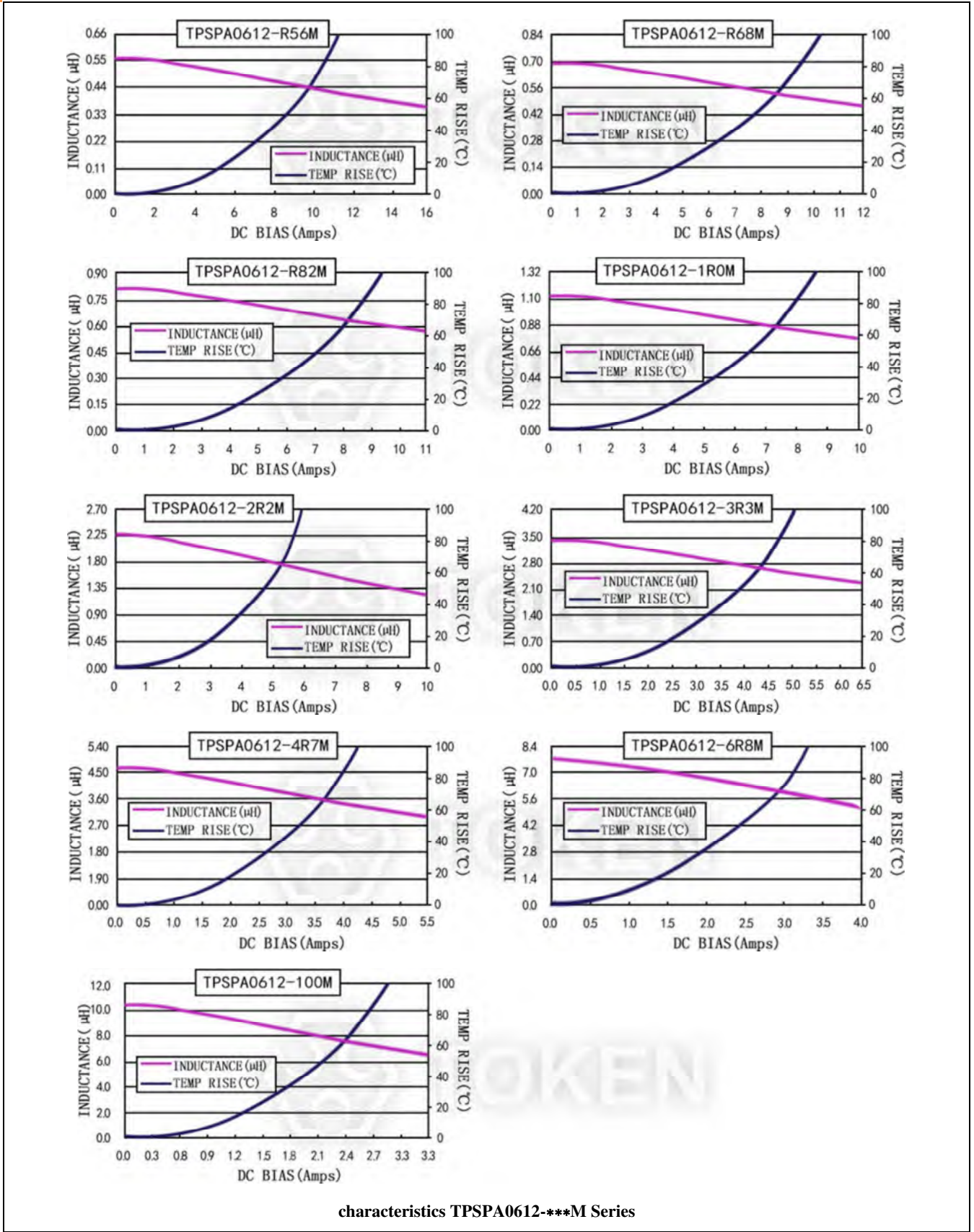
Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA0612-R56M	0.56	15.5	7.0	11.0
TPSPA0612-R68M	0.68	17.5	6.7	9.0
TPSPA0612-R82M	0.82	24.5	6.3	8.0
TPSPA0612-1R0M	1.00	29.0	6.0	7.0
TPSPA0612-2R2M	2.20	59.0	4.0	5.0
TPSPA0612-3R3M	3.30	92.0	3.0	4.0
TPSPA0612-4R7M	4.70	122.0	2.7	3.5
TPSPA0612-6R8M	6.80	210.0	2.2	2.8
TPSPA0612-100M	10.00	290.0	2.0	2.2

Note:

- Test frequency at 100KHZ / 1.0V.
- I<sub>dc</sub> (I<sub>rms</sub>): Current that causes a 40°C temperature rise from 25°C ambient.
- I<sub>sat</sub>: DC current at which the inductance drops 30% from its value without current.



Current characteristics TPSPA0612-\*\*\*M Series



characteristics TPSPA0612-\*\*\*M Series



▶ 0615

**Electrical Characteristics (TPSPA0615)**

Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA0615-R56M	0.56	11.0	9.0	14.0
TPSPA0615-R68M	0.68	12.0	8.5	12.0
TPSPA0615-R82M	0.82	17.0	7.0	10.0
TPSPA0615-1R0M	1.00	21.0	5.5	9.0
TPSPA0615-1R2M	1.20	30.0	5.4	8.5
TPSPA0615-2R2M	2.20	54.0	3.5	6.0
TPSPA0615-3R3M	3.30	63.0	3.3	5.5
TPSPA0615-4R7M	4.70	85.0	3.2	5.0
TPSPA0615-6R8M	6.80	135.0	2.5	4.0
TPSPA0615-100M	10.00	175.0	2.0	3.0

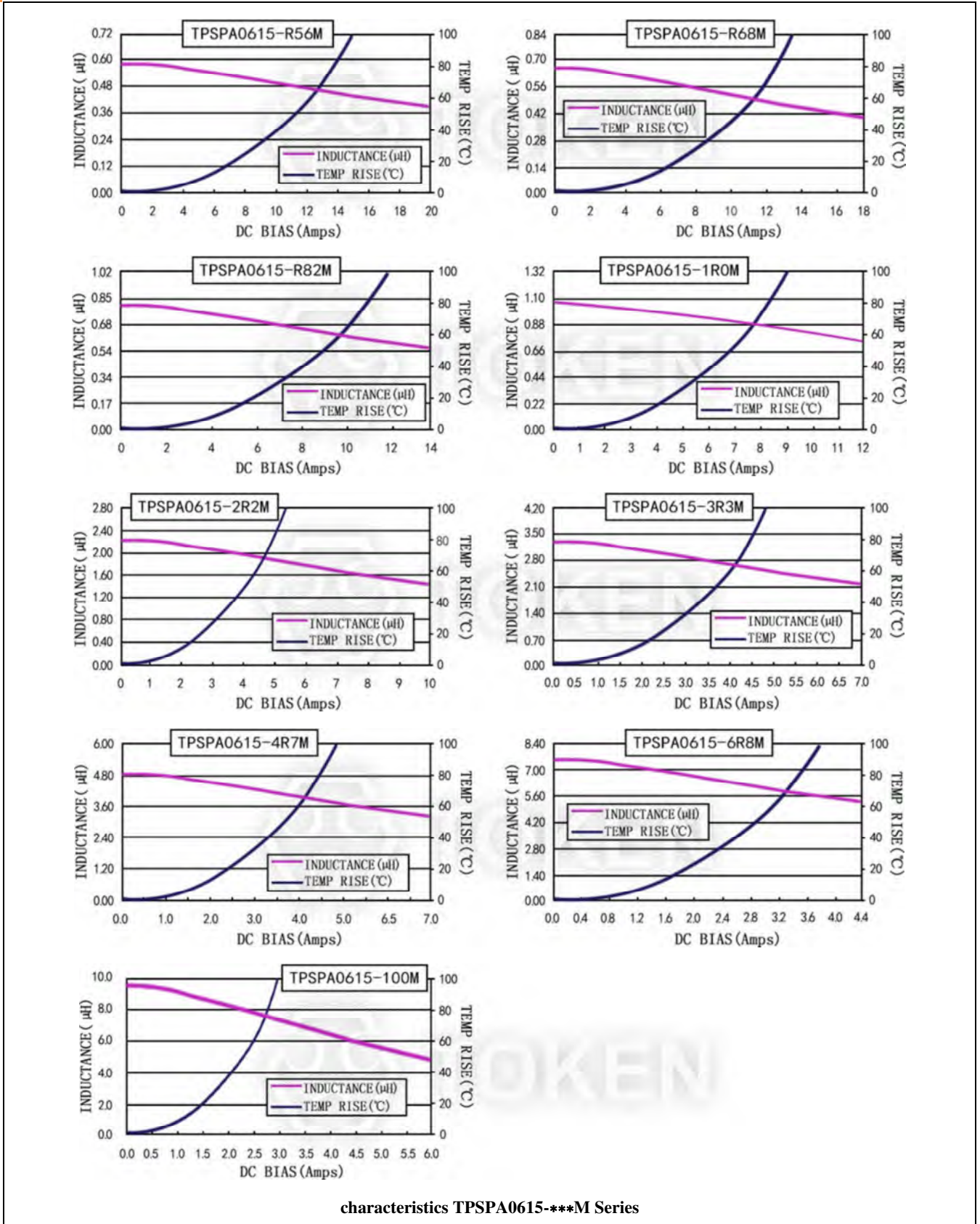
Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms):Current that causes a 40°C temperature rise from 25°C ambient.
- Isat:DC current at which the inductance drops 30% from its value without current.





Current characteristics TPSPA0615-\*\*\*M Series



characteristics TPSPA0615-\*\*\*M Series





▶ 0618

**Electrical Characteristics (TPSPA0618)**

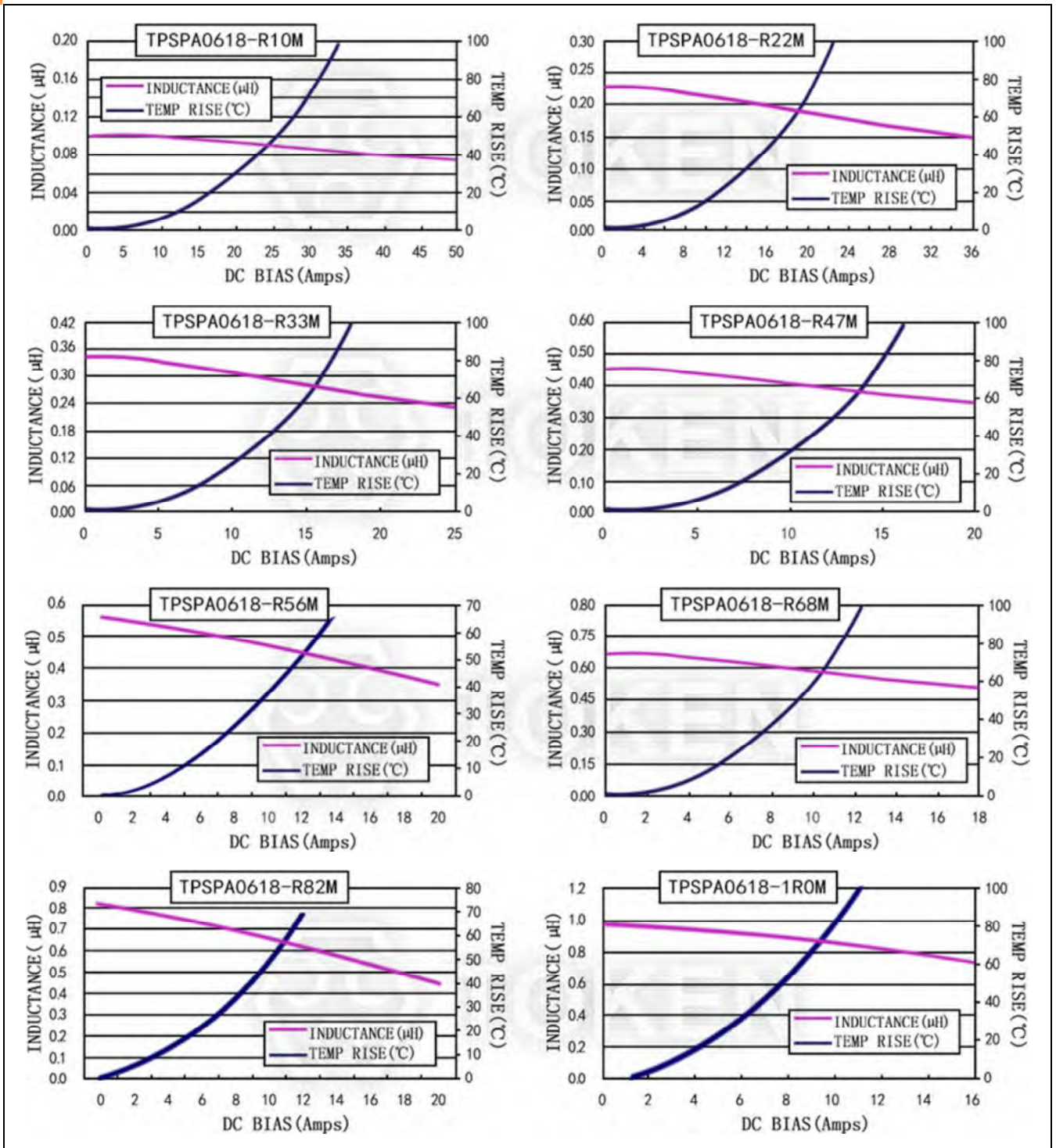
Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA0618-R10M	0.10	2.5	18.0	45.0
TPSPA0618-R22M	0.22	5.2	14.0	29.0
TPSPA0618-R33M	0.33	6.8	12.0	22.0
TPSPA0618-R47M	0.47	8.4	11.0	18.0
TPSPA0618-R56M	0.56	10.0	10.0	15.0
TPSPA0618-R68M	0.68	12.7	9.0	13.0
TPSPA0618-R82M	0.82	13.5	8.0	12.0
TPSPA0618-1R0M	1.00	17.0	7.0	11.0
TPSPA0618-1R5M	1.50	26.0	6.5	9.0
TPSPA0618-2R0M	2.00	32.0	6.0	9.0
TPSPA0618-2R2M	2.20	35.0	5.0	8.0
TPSPA0618-3R3M	3.30	50.0	3.5	7.5
TPSPA0618-4R7M	4.70	65.0	3.5	5.0
TPSPA0618-5R6M	5.60	75.0	3.0	4.0
TPSPA0618-6R8M	6.80	110.0	2.8	3.5
TPSPA0618-8R2M	8.20	135.0	2.5	3.0
TPSPA0618-100M	10.00	155.0	2.3	2.5
TPSPA0618-150M	15.00	250.0	1.8	2.2

Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.

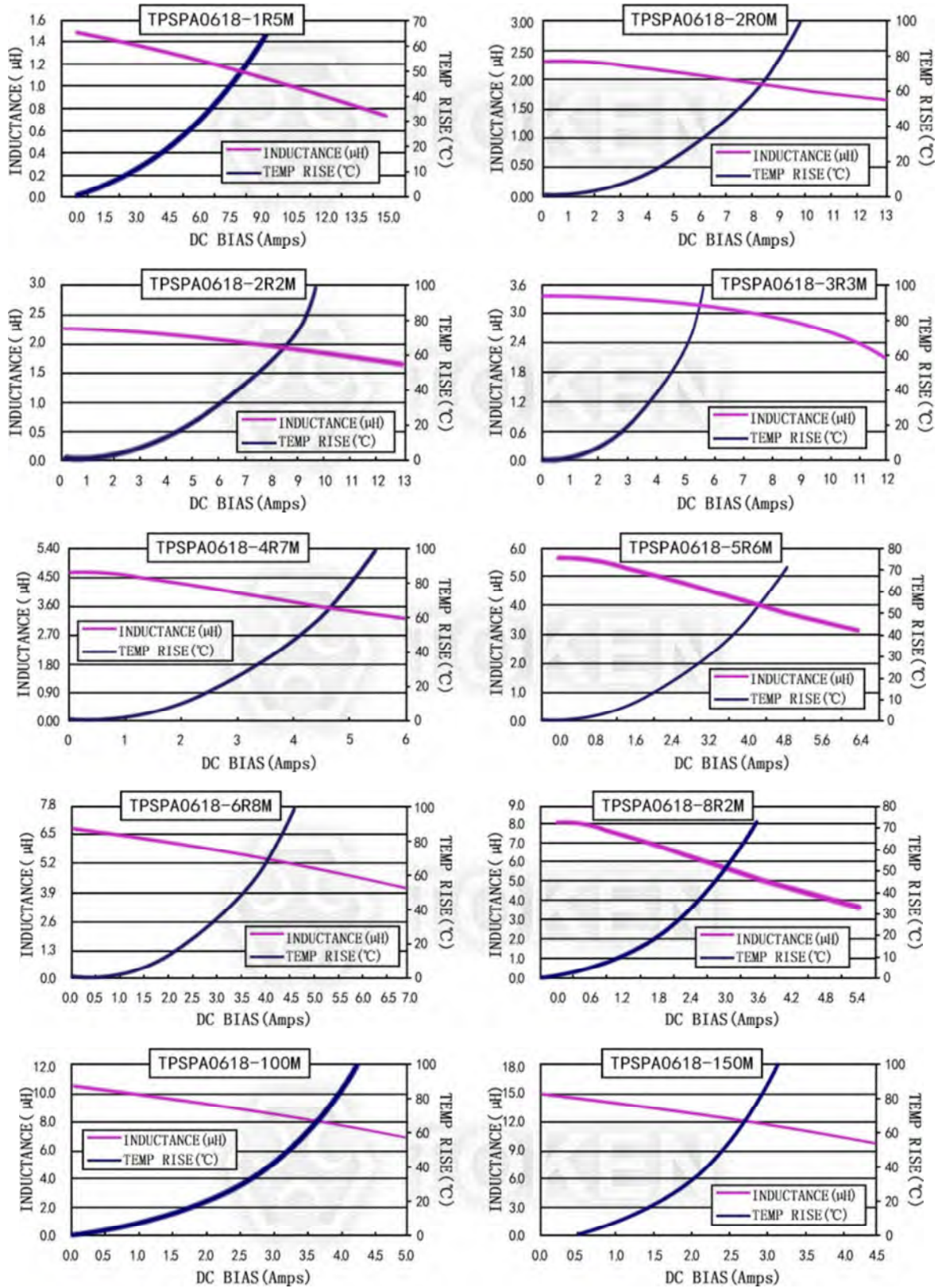


Current characteristics TPSPA0618-\*\*\*M Series





Current characteristics TPSPA0618-\*\*\*M Series



characteristics TPSPA0618-\*\*\*M Series



▶ 0624

**Electrical Characteristics (TPSPA0624)**

Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA0624-R10M	0.10	1.7	30.0	70.0
TPSPA0624-R20M	0.20	2.8	25.0	50.0
TPSPA0624-R22M	0.22	3.2	21.0	34.0
TPSPA0624-R33M	0.33	4.1	15.0	24.0
TPSPA0624-R47M	0.47	5.1	13.0	21.0
TPSPA0624-R56M	0.56	6.5	12.0	17.0
TPSPA0624-R82M	0.82	9.5	10.0	14.0
TPSPA0624-1R0M	1.00	13.5	9.0	13.0
TPSPA0624-1R5M	1.50	20.0	8.0	11.0
TPSPA0624-2R2M	2.20	28.0	6.0	9.0
TPSPA0624-3R3M	3.30	39.0	5.0	7.0
TPSPA0624-4R7M	4.70	50.0	4.0	6.0
TPSPA0624-5R6M	5.60	60.0	4.0	6.0
TPSPA0624-6R8M	6.80	70.0	4.0	5.0
TPSPA0624-8R2M	8.20	86.0	3.5	5.0
TPSPA0624-100M	10.00	101.0	3.1	4.0
TPSPA0624-150M	15.00	160.0	2.5	3.3

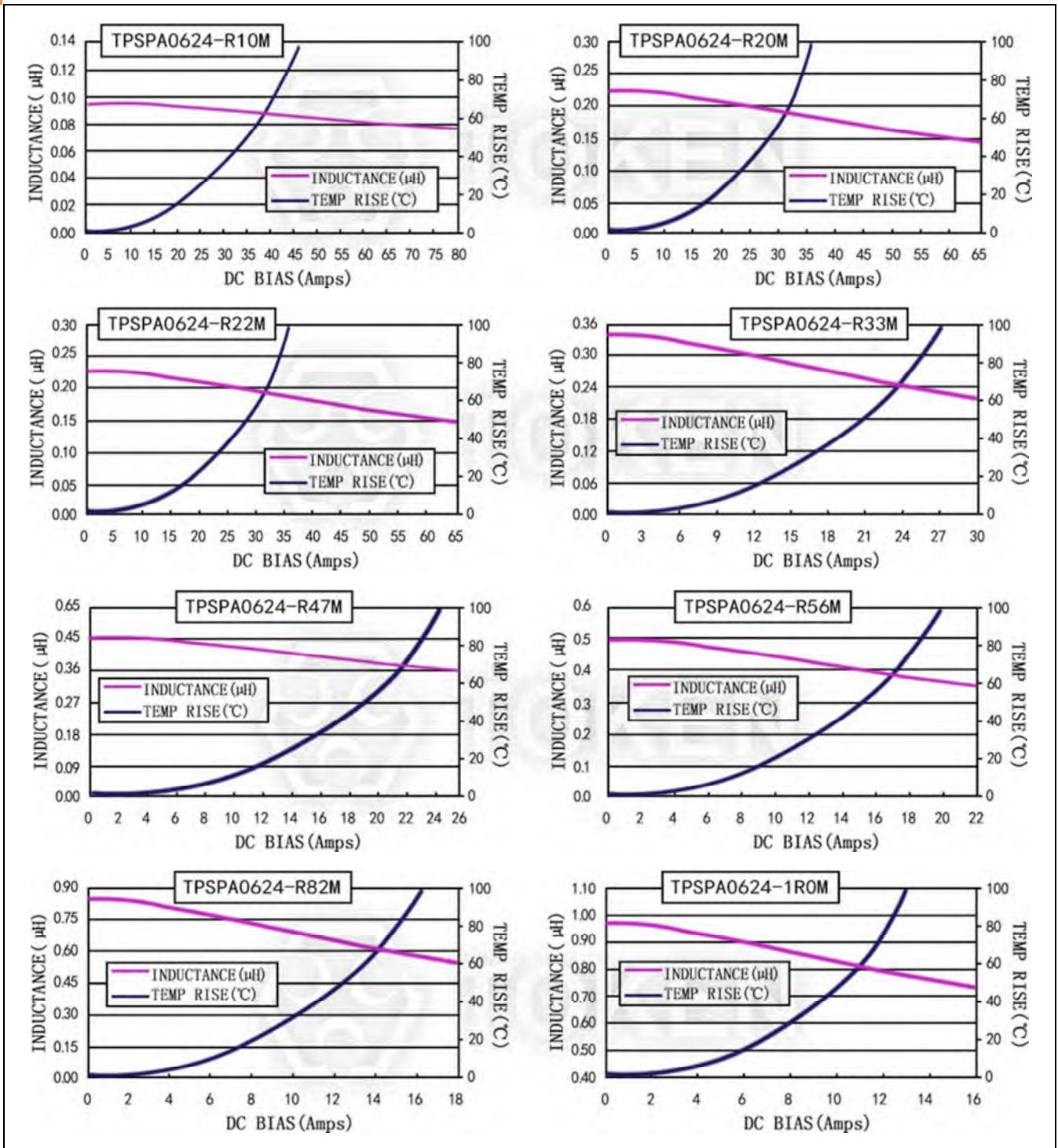
Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.

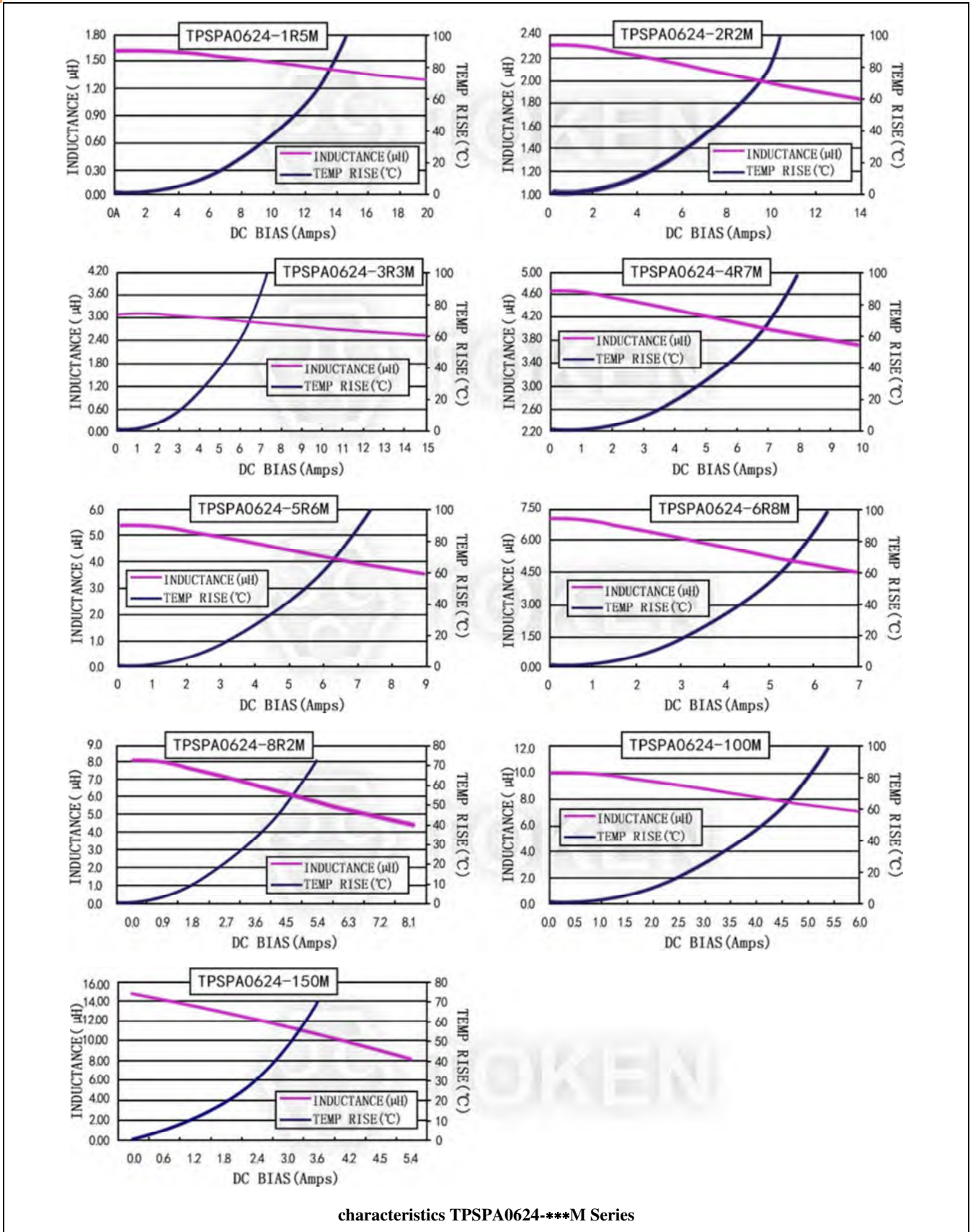




Current characteristics TPSPA0624-\*\*\*M Series



Current characteristics TPSPA0624-\*\*\*M Series



characteristics TPSPA0624-\*\*\*M Series





▶ 0630

**Electrical Characteristics (TPSPA0630)**

Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA0630-R10M	0.10	1.7	32.5	60.0
TPSPA0630-R15M	0.15	2.5	30.0	40.0
TPSPA0630-R20M	0.20	3.0	21.0	34.0
TPSPA0630-R22M	0.22	3.0	21.0	34.0
TPSPA0630-R33M	0.33	3.5	21.0	22.0
TPSPA0630-R36M	0.36	3.9	16.0	20.0
TPSPA0630-R47M	0.47	4.1	15.5	19.0
TPSPA0630-R56M	0.56	4.9	15.0	18.0
TPSPA0630-R68M	0.68	5.7	14.0	17.0
TPSPA0630-R82M	0.82	6.9	12.0	16.0
TPSPA0630-1R0M	1.00	7.5	12.0	15.0
TPSPA0630-1R2M	1.20	10.5	9.0	12.0
TPSPA0630-1R5M	1.50	12.1	9.0	14.0
TPSPA0630-1R8M	1.80	16.0	7.5	13.0
TPSPA0630-2R2M	2.20	17.5	7.0	10.0
TPSPA0630-2R5M	2.50	18.0	7.0	10.0
TPSPA0630-3R3M	3.30	26.0	6.5	9.5
TPSPA0630-4R7M	4.70	38.0	5.0	6.5
TPSPA0630-5R6M	5.60	42.0	5.0	6.25
TPSPA0630-6R8M	6.80	54.0	4.5	6.0
TPSPA0630-8R2M	8.20	65.0	4.0	6.0
TPSPA0630-100M	10.00	76.0	4.0	4.5
TPSPA0630-120M	12.00	98.0	3.0	4.2
TPSPA0630-150M	15.00	115.0	3.0	3.8
TPSPA0630-220M	22.00	189.0	1.5	3.1
TPSPA0630-330M	33.00	257.0	1.0	2.9

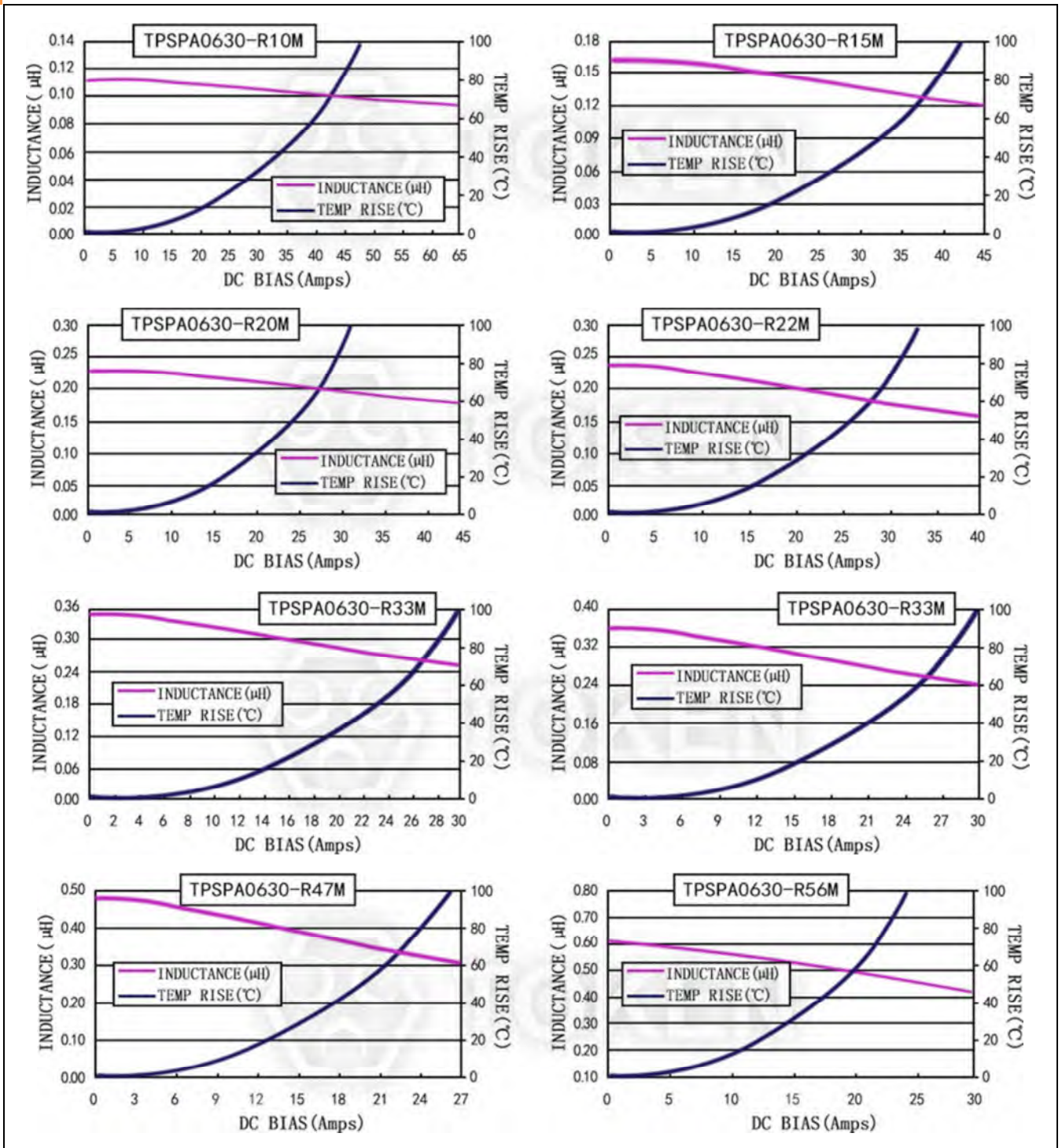
Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.

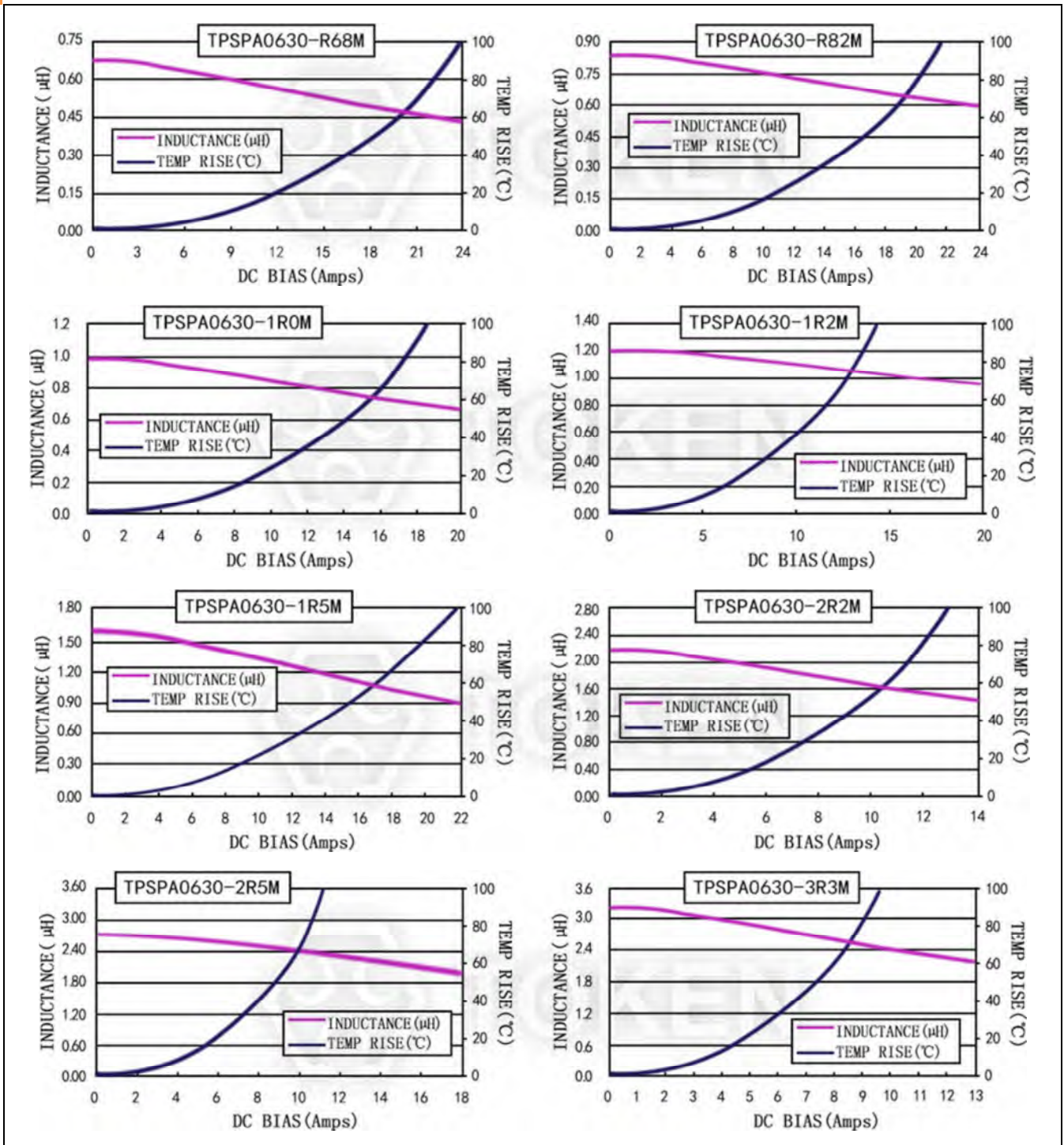




Current characteristics TPSPA0630-\*\*\*M Series

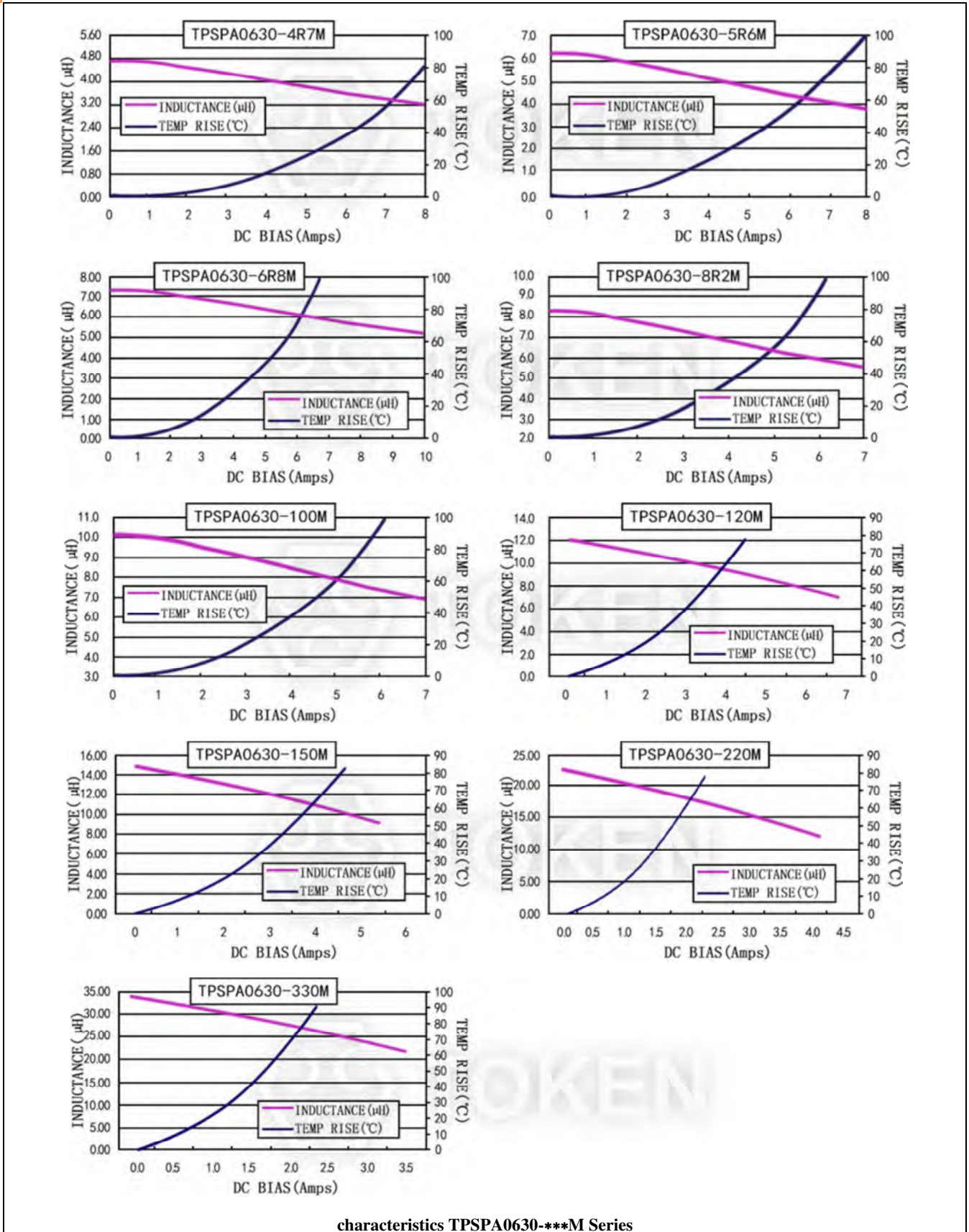


Current characteristics TPSPA0630-\*\*\*M Series





Current characteristics TPSPA0630-\*\*\*M Series



characteristics TPSPA0630-\*\*\*M Series





▶ 0650

**Electrical Characteristics (TPSPA0650)**

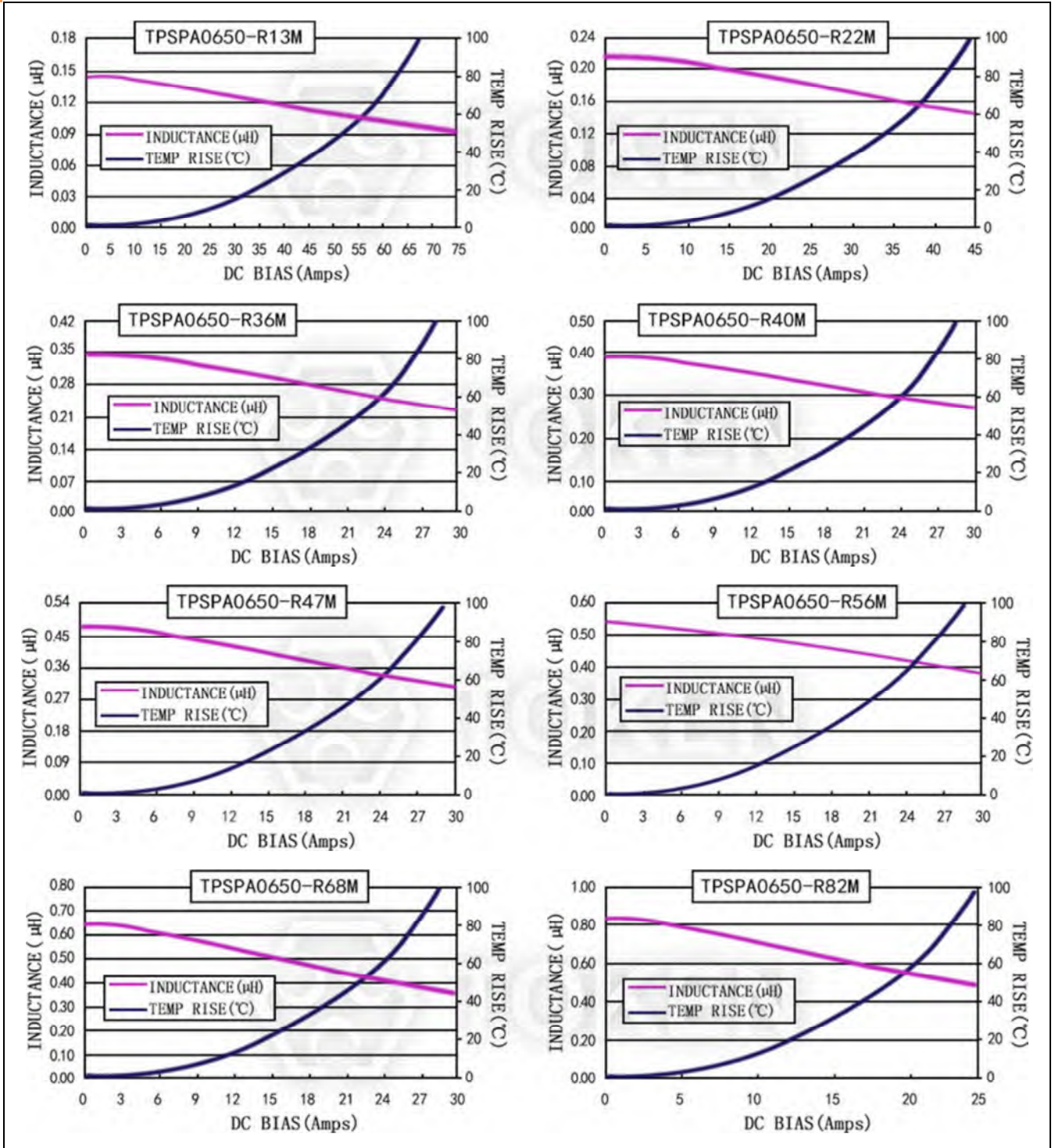
Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA0650-R13M	0.13	1.2	42.0	48.0
TPSPA0650-R22M	0.22	1.3	30.0	35.0
TPSPA0650-R36M	0.36	3.1	21.0	25.0
TPSPA0650-R40M	0.40	3.5	20.0	23.0
TPSPA0650-R47M	0.47	3.8	20.0	21.0
TPSPA0650-R56M	0.56	3.6	20.0	18.0
TPSPA0650-R68M	0.68	4.2	18.0	16.0
TPSPA0650-R82M	0.82	4.9	16.5	15.0
TPSPA0650-1R0M	1.00	6.5	12.0	13.0
TPSPA0650-1R2M	1.20	7.5	11.0	11.0
TPSPA0650-1R5M	1.50	8.5	10.0	10.0
TPSPA0650-2R2M	2.20	12.5	9.5	10.0
TPSPA0650-3R3M	3.30	20.9	8.5	9.0
TPSPA0650-4R7M	4.70	29.0	6.0	8.0
TPSPA0650-5R6M	5.60	34.4	6.0	7.0
TPSPA0650-6R8M	6.80	40.0	5.5	7.0
TPSPA0650-8R2M	8.20	43.0	5.5	6.5
TPSPA0650-100M	10.00	55.0	4.5	6.0
TPSPA0650-120M	12.00	65.0	4.0	5.0
TPSPA0650-150M	15.00	85.0	3.1	4.0
TPSPA0650-180M	18.00	105.0	3.0	3.5
TPSPA0650-220M	22.00	130.0	2.6	3.5
TPSPA0650-330M	33.00	200.0	2.3	3.0
TPSPA0650-470M	47.00	290.0	2.0	2.8

Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.

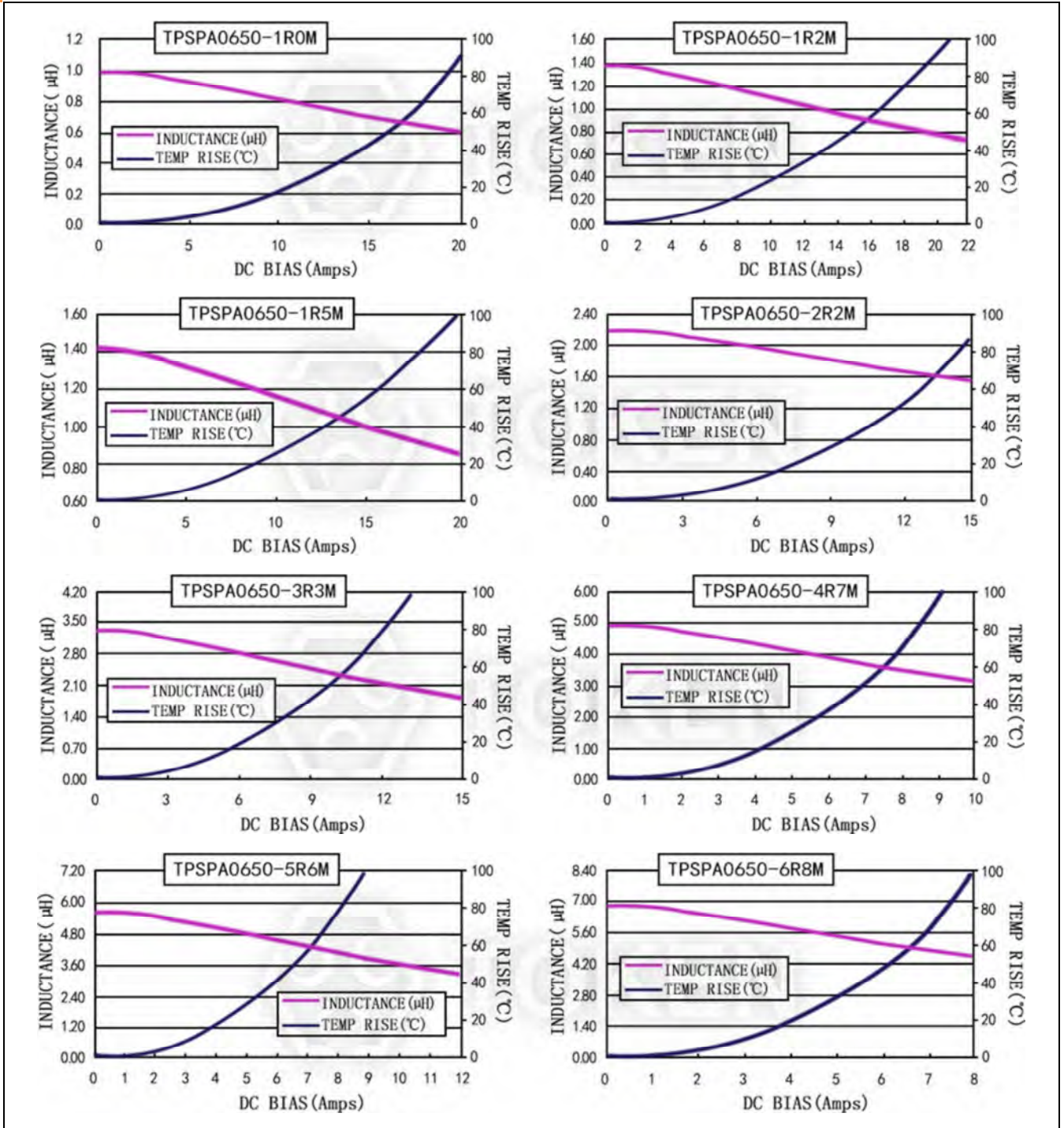


Current characteristics TPSPA0650-\*\*\*M Series



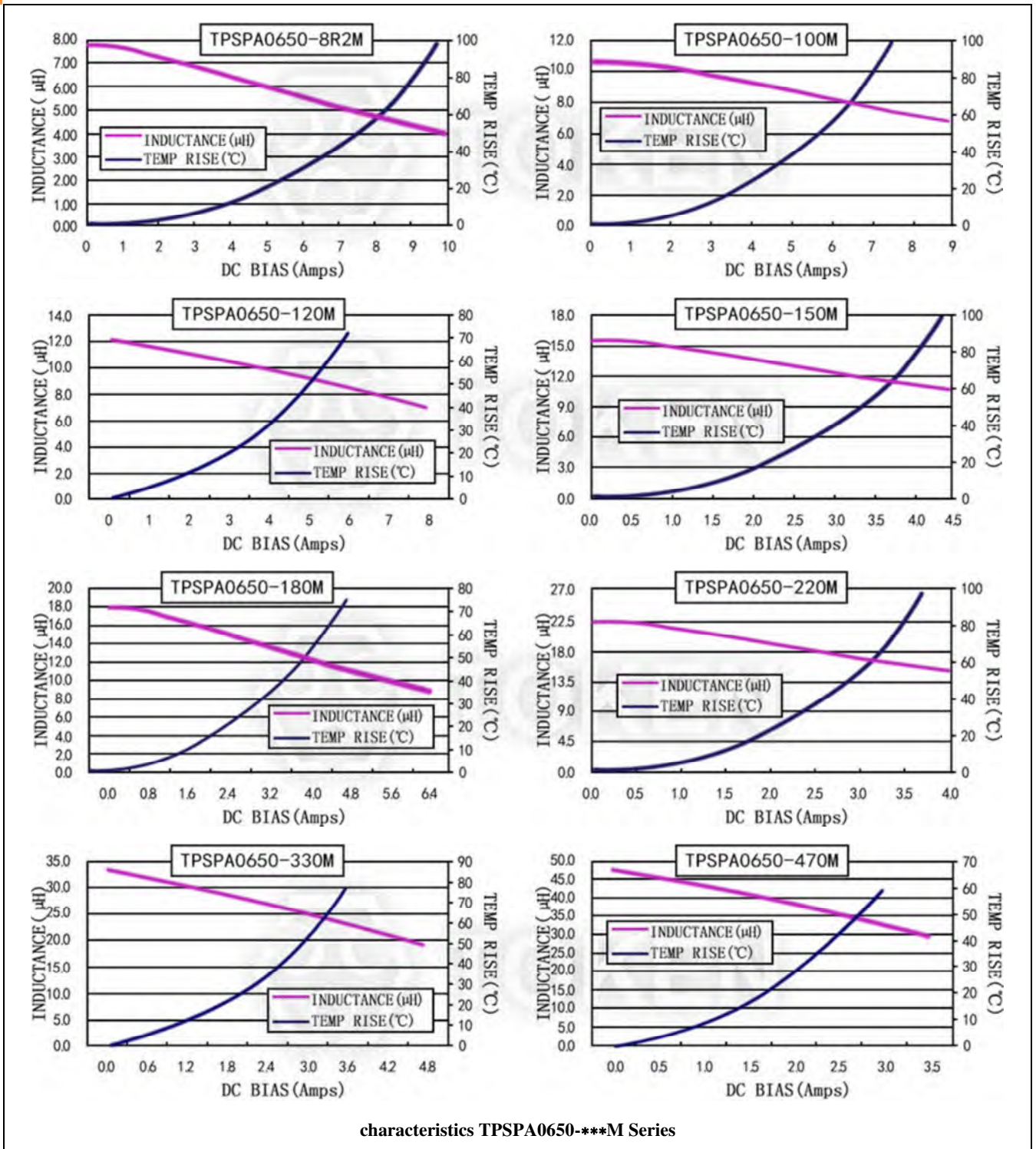


Current characteristics TPSPA0650-\*\*\*M Series





Current characteristics TPSPA0650-\*\*\*M Series



▶ 1030

**Electrical Characteristics (TPSPA1030)**

Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA1030-R33M	0.33	1.6	23.0	32.0
TPSPA1030-R36M	0.36	1.6	23.0	28.0
TPSPA1030-R47M	0.47	2.5	23.0	26.0
TPSPA1030-R56M	0.56	3.0	22.0	24.0
TPSPA1030-R68M	0.68	3.4	21.0	23.0
TPSPA1030-1R0M	1.00	6.0	15.0	21.0
TPSPA1030-1R5M	1.50	7.5	12.0	18.0
TPSPA1030-2R2M	2.20	9.0	11.0	14.0
TPSPA1030-3R3M	3.30	16.0	9.0	12.0
TPSPA1030-4R7M	4.70	22.5	7.0	10.0
TPSPA1030-5R6M	5.60	30.0	6.0	10.0
TPSPA1030-6R8M	6.80	35.0	5.5	7.5
TPSPA1030-8R2M	8.20	45.0	5.0	7.0
TPSPA1030-100M	10.00	55.0	4.5	6.5
TPSPA1030-150M	15.00	65.0	4.0	5.0
TPSPA1030-220M	22.00	99.0	3.0	4.0
TPSPA1030-330M	33.00	145.0	2.0	3.0

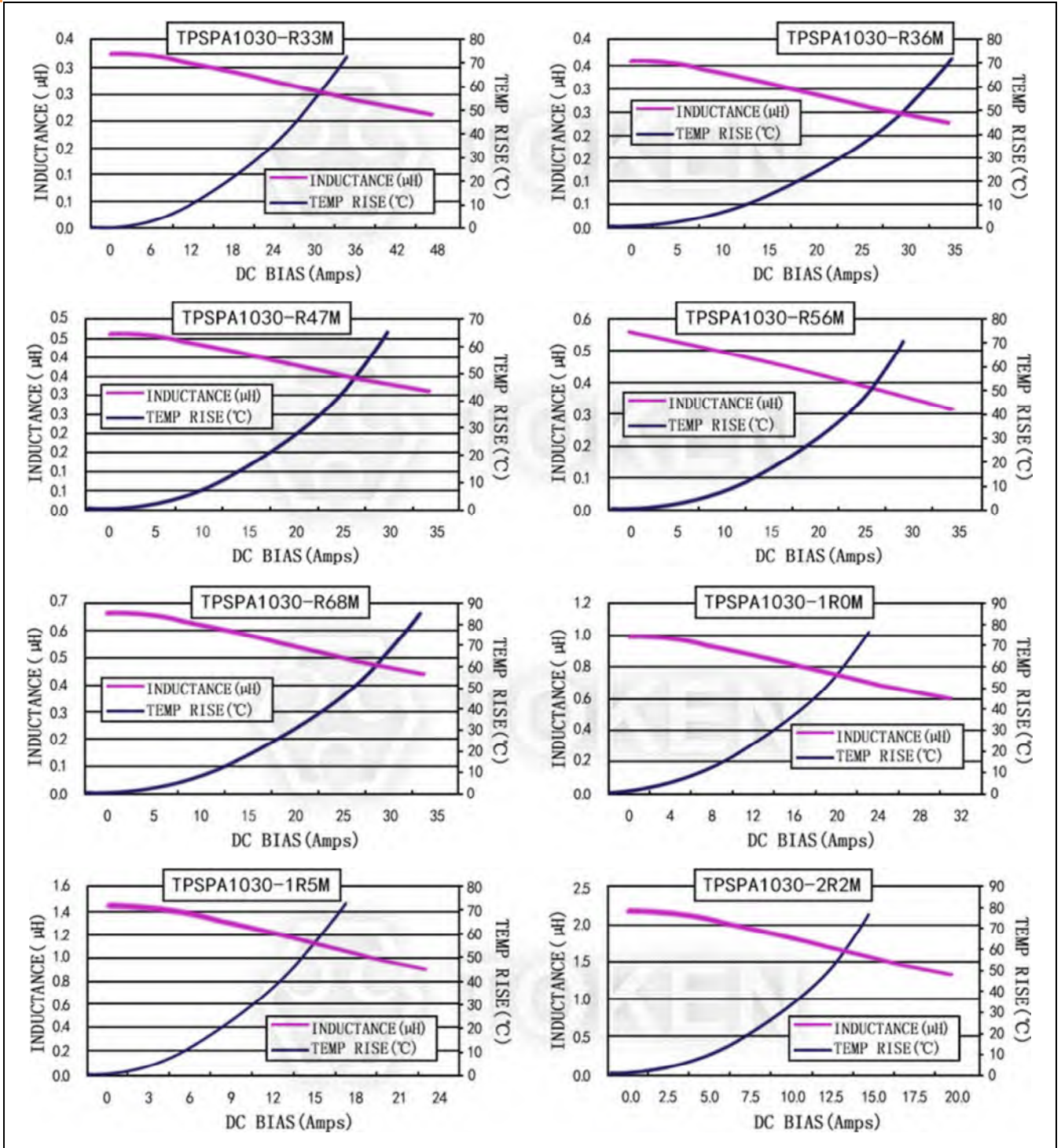
Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.



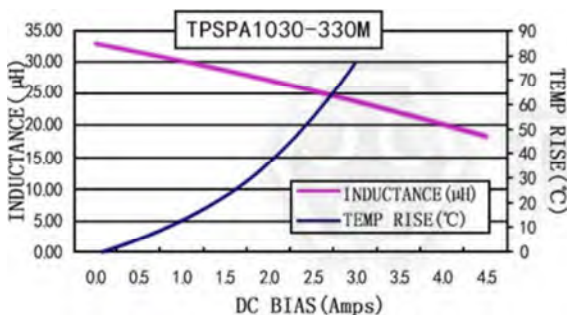
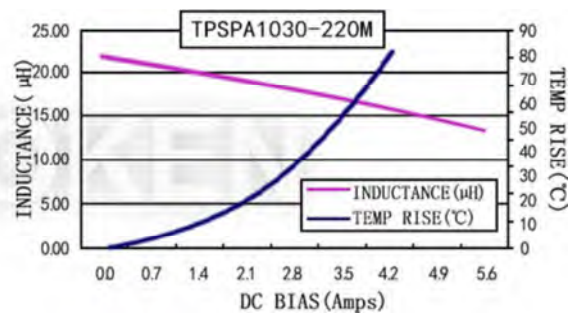
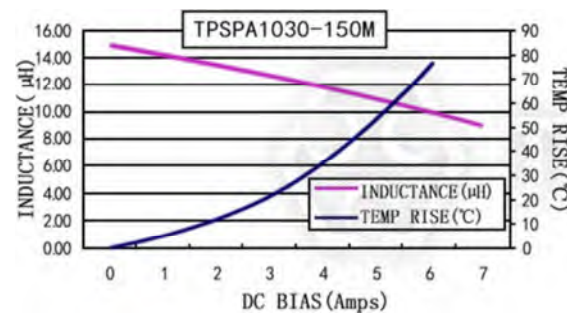
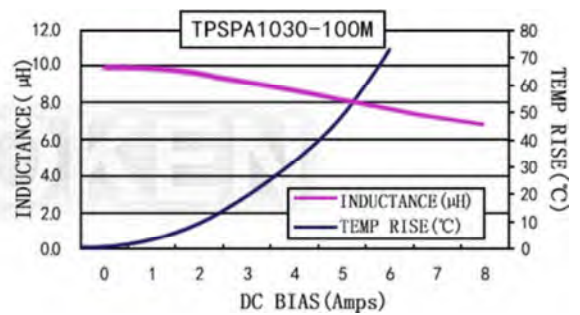
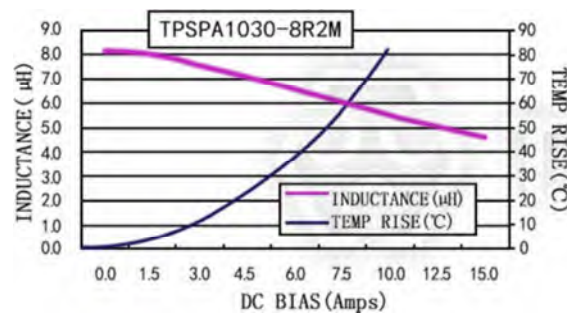
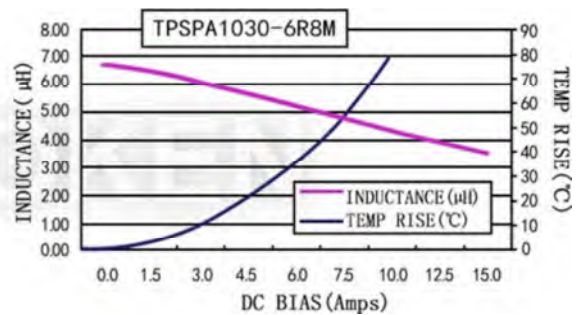
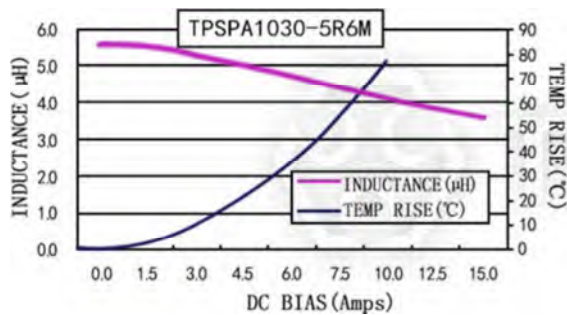
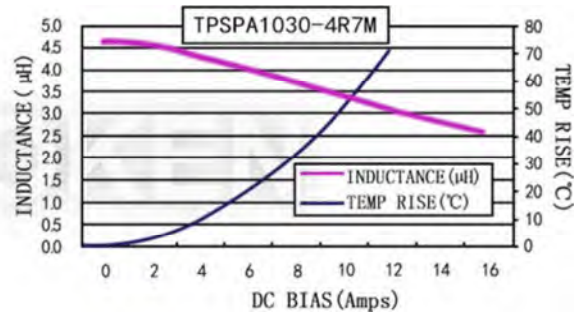
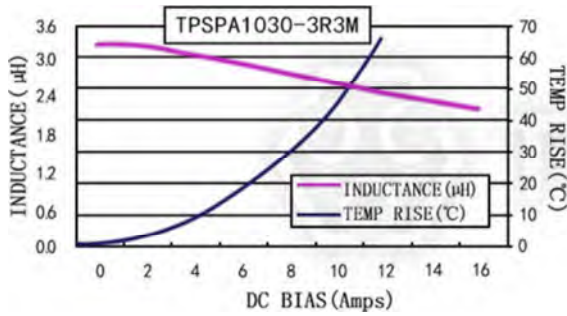


Current characteristics TPSPA1030-\*\*\*M Series





Current characteristics TPSPA1030-\*\*\*M Series



characteristics TPSPA1030-\*\*\*M Series

▶ 1040

**Electrical Characteristics (TPSPA1040)**

Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA1040-R15M	0.15	0.65	40.0	75.0
TPSPA1040-R22M	0.22	1.0	35.0	60.0
TPSPA1040-R33M	0.33	1.2	25.0	51.0
TPSPA1040-R36M	0.36	1.2	25.0	50.0
TPSPA1040-R39M	0.39	1.2	25.0	45.0
TPSPA1040-R47M	0.47	1.68	24.0	35.0
TPSPA1040-R56M	0.56	1.8	23.5	33.0
TPSPA1040-R68M	0.68	2.4	23.0	30.0
TPSPA1040-1R0M	1.00	3.3	18.0	28.0
TPSPA1040-1R5M	1.50	4.2	15.0	24.0
TPSPA1040-1R8M	1.80	5.8	13.0	15.0
TPSPA1040-2R0M	2.00	6.9	12.0	14.0
TPSPA1040-2R2M	2.20	7.0	12.0	18.0
TPSPA1040-3R3M	3.30	11.8	10.0	16.0
TPSPA1040-4R7M	4.70	20.0	8.5	13.0
TPSPA1040-5R6M	5.60	23.0	8.0	11.0
TPSPA1040-6R8M	6.80	25.0	7.0	10.0
TPSPA1040-8R2M	8.20	27.0	6.0	9.0
TPSPA1040-100M	10.00	30.0	5.5	8.5
TPSPA1040-120M	12.00	42.0	5.0	8.0
TPSPA1040-150M	15.00	45.0	4.5	7.0
TPSPA1040-220M	22.00	66.0	4.0	5.5
TPSPA1040-330M	33.00	92.0	3.5	5.0
TPSPA1040-470M	47.00	145.0	2.8	3.7
TPSPA1040-680M	68.00	205.0	2.3	3.0
TPSPA1040-820M	82.00	280.0	2.0	3.0
TPSPA1040-101M	100.00	300.0	1.5	2.0

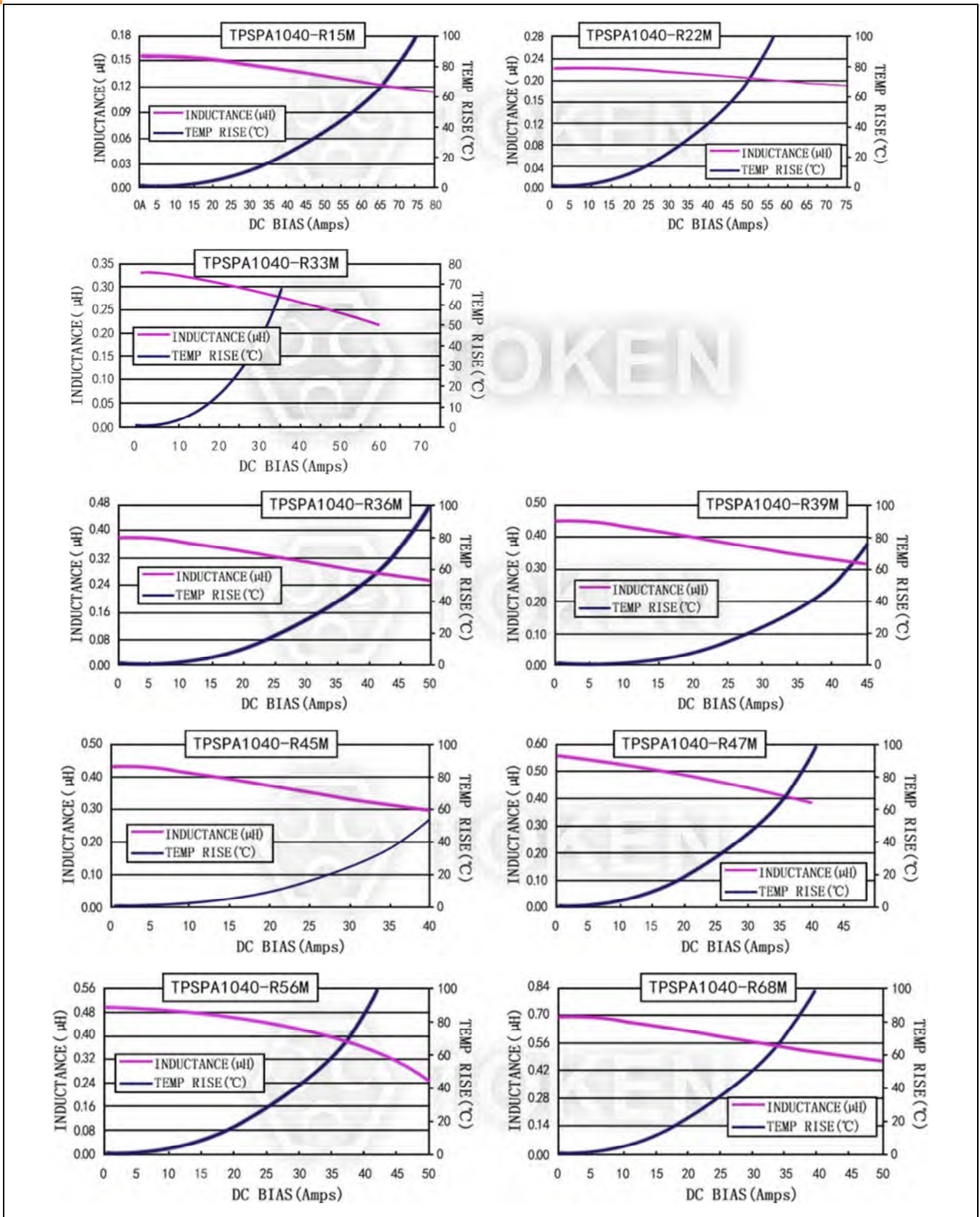
Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.



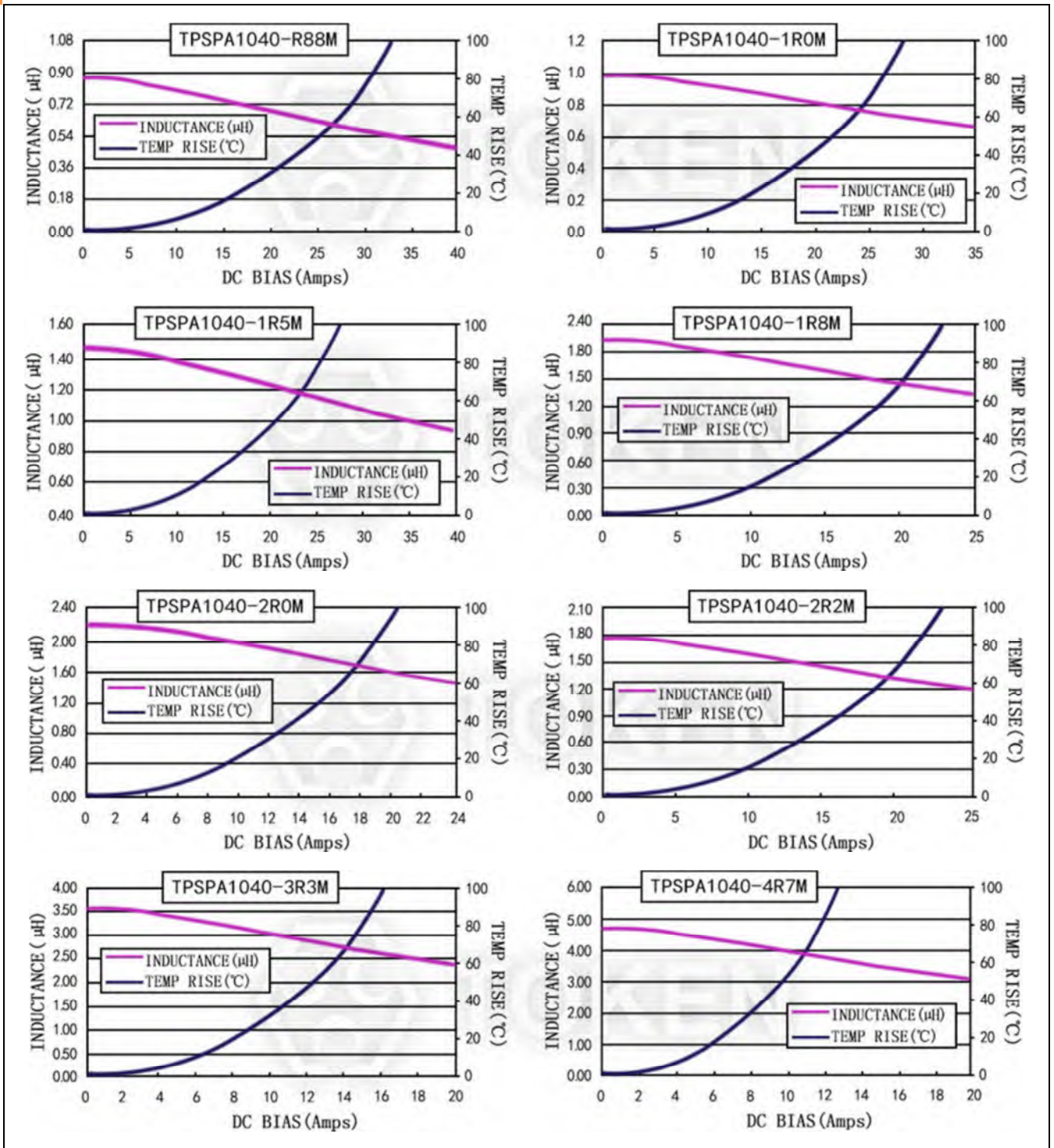


Current characteristics TPSPA1040-\*\*\*M Series

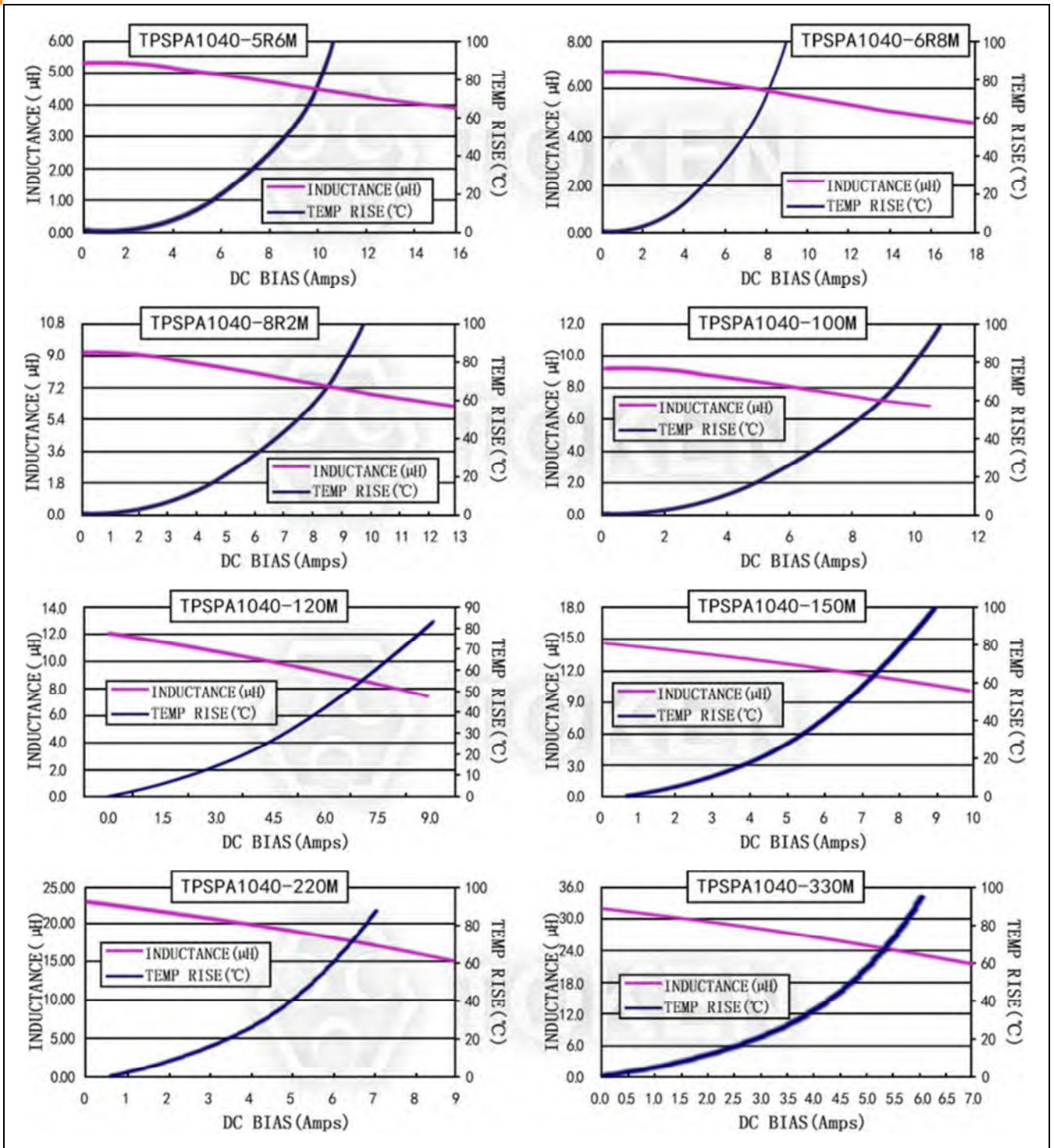




Current characteristics TPSPA1040-\*\*\*M Series

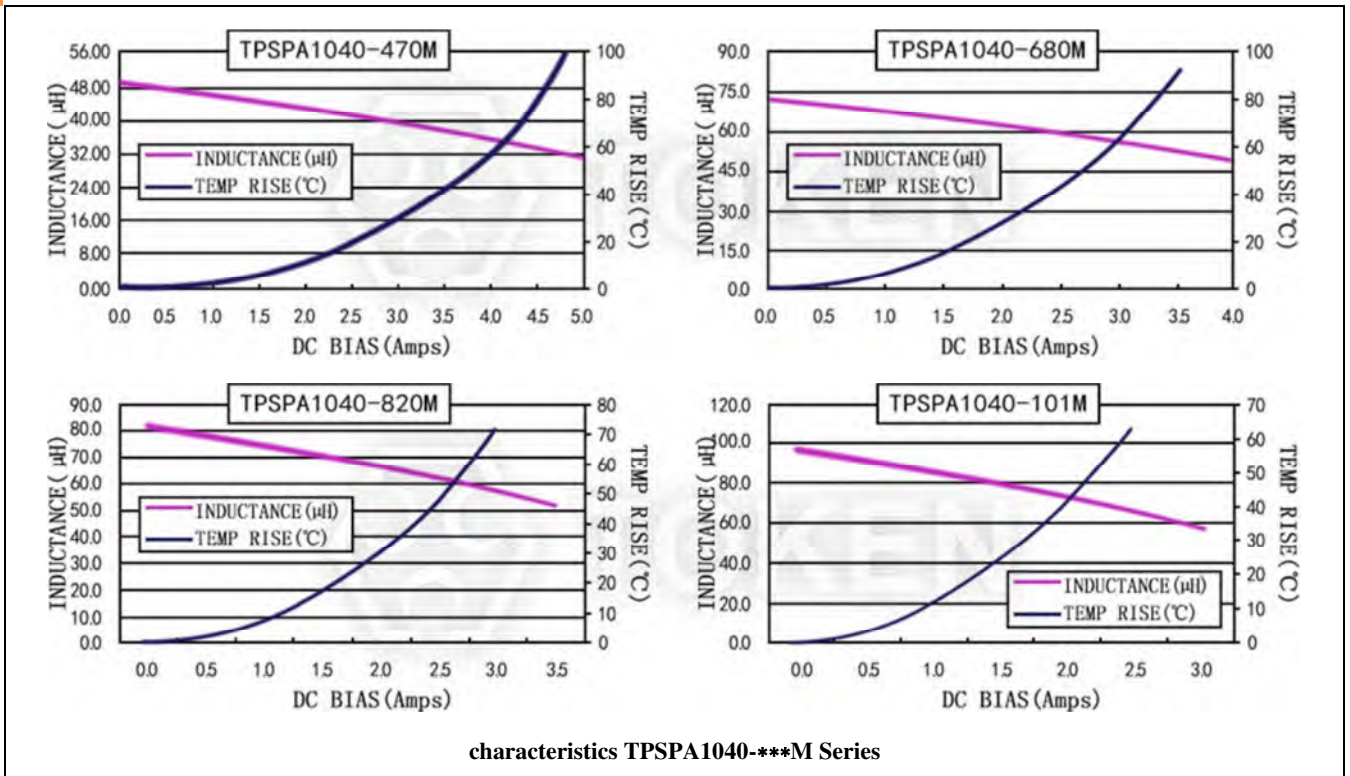


Current characteristics TPSPA1040-\*\*\*M Series





Current characteristics TPSPA1040-\*\*\*M Series





▶ 1050

**Electrical Characteristics (TPSPA1050)**

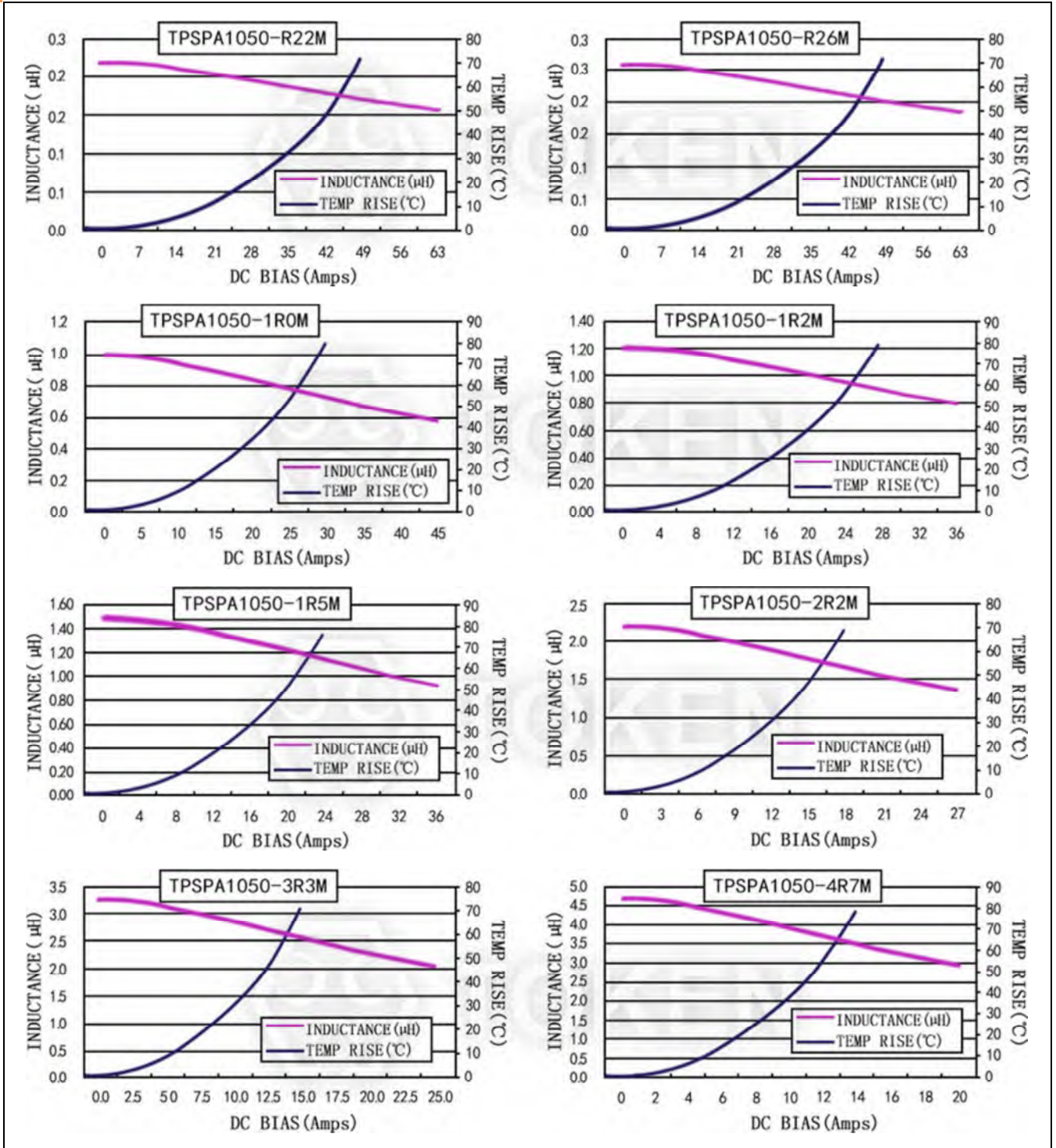
Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA1050-R22M	0.22	0.8	37.0	60.0
TPSPA1050-R26M	0.26	1.0	35.0	60.0
TPSPA1050-1R0M	1.00	2.6	19.0	29.0
TPSPA1050-1R2M	1.20	3.1	18.0	28.0
TPSPA1050-1R5M	1.50	3.8	16.0	25.0
TPSPA1050-2R2M	2.20	6.0	13.0	20.0
TPSPA1050-3R3M	3.30	11.8	10.0	18.0
TPSPA1050-4R7M	4.70	15.0	9.0	15.0
TPSPA1050-6R8M	6.80	18.5	8.5	14.0
TPSPA1050-100M	10.00	28.0	6.0	10.0
TPSPA1050-220M	22.00	50.0	5.5	6.0
TPSPA1050-330M	33.00	76.0	4.5	5.0

**Note:**

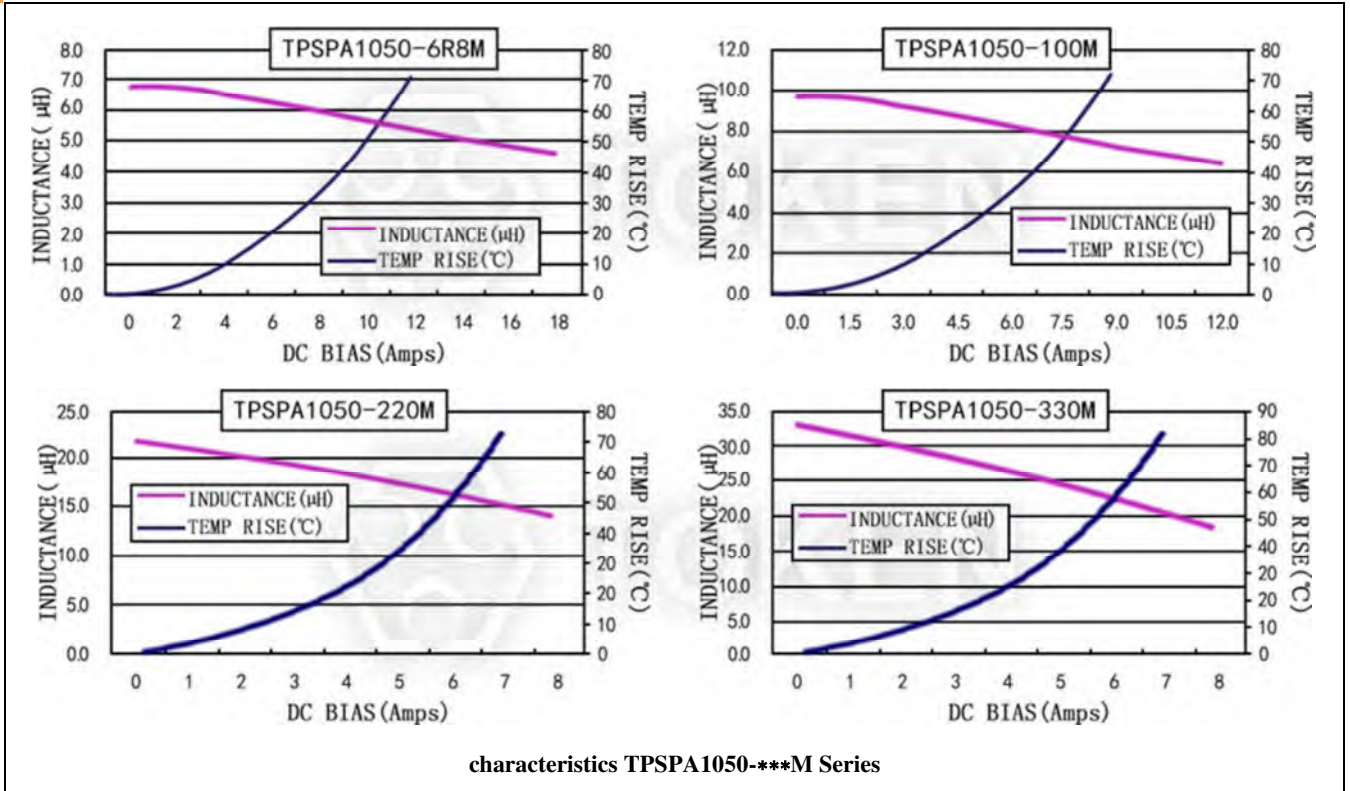
- Test frequency at 100KHZ / 1.0V.
- I<sub>dc</sub> (I<sub>rms</sub>): Current that causes a 40°C temperature rise from 25°C ambient.
- I<sub>sat</sub>: DC current at which the inductance drops 30% from its value without current.



Current characteristics TPSPA1050-\*\*\*M Series



Current characteristics TPSPA1050-\*\*\*M Series





▶ 1335

**Electrical Characteristics (TPSPA1335)**

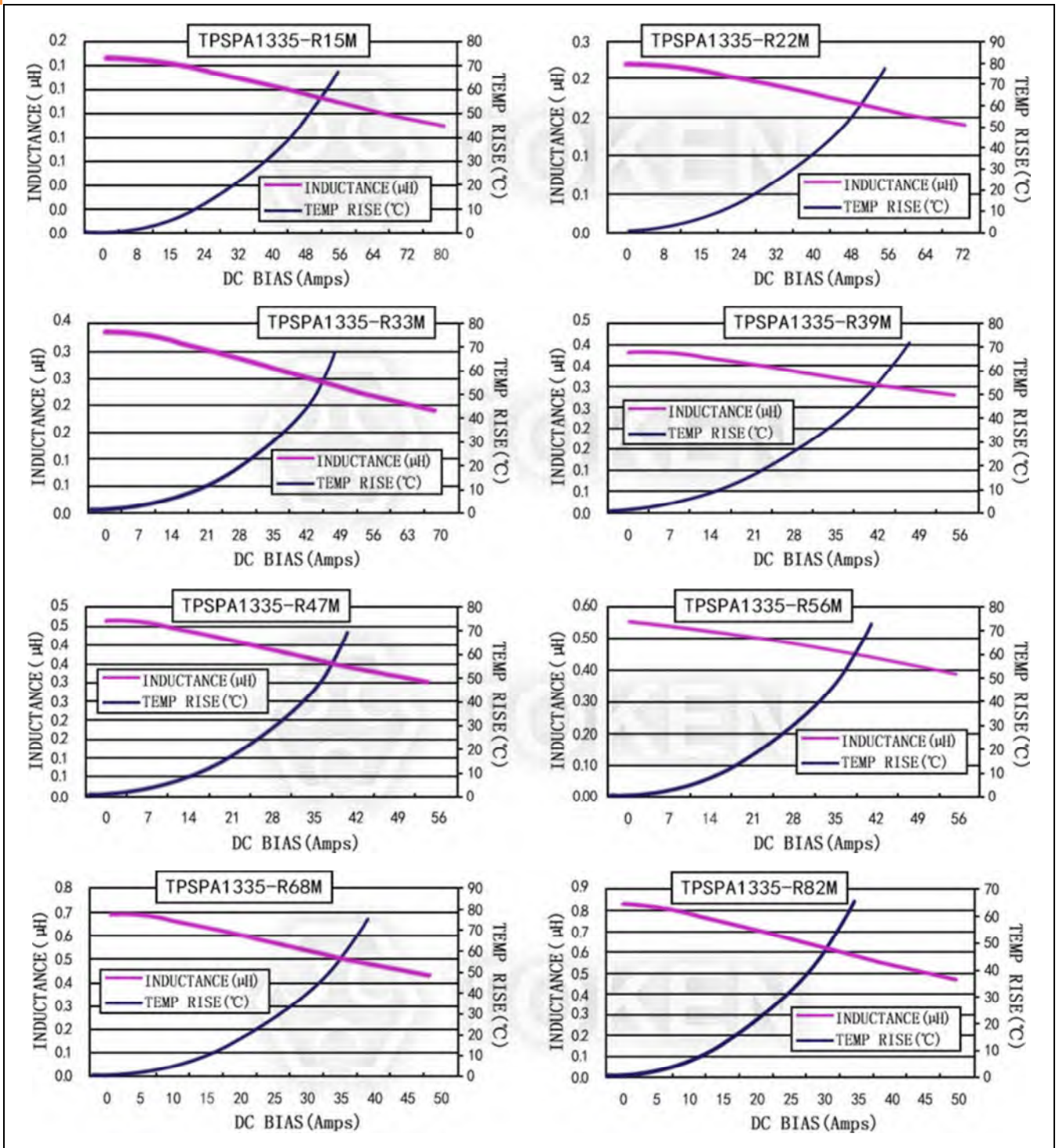
Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA1335-R15M	0.15	0.85	39.0	60.0
TPSPA1335-R22M	0.22	1.3	38.0	57.0
TPSPA1335-R33M	0.33	1.5	36.5	52.0
TPSPA1335-R39M	0.39	1.5	34.0	50.0
TPSPA1335-R47M	0.47	2.0	32.0	47.0
TPSPA1335-R56M	0.56	2.2	29.0	43.0
TPSPA1335-R68M	0.68	2.5	28.0	41.0
TPSPA1335-R82M	0.82	3.0	25.0	36.0
TPSPA1335-1R0M	1.00	3.5	24.0	29.0
TPSPA1335-1R5M	1.50	5.5	19.0	27.0
TPSPA1335-2R2M	2.20	8.0	16.0	19.0
TPSPA1335-3R3M	3.30	12.0	13.0	14.0
TPSPA1335-4R7M	4.70	18.0	9.0	12.0
TPSPA1335-5R6M	5.60	22.0	8.0	8.0
TPSPA1335-6R8M	6.80	25.0	7.0	7.0
TPSPA1335-8R2M	8.20	30.0	6.5	6.0
TPSPA1335-100M	10.00	35.0	6.0	4.0

Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.

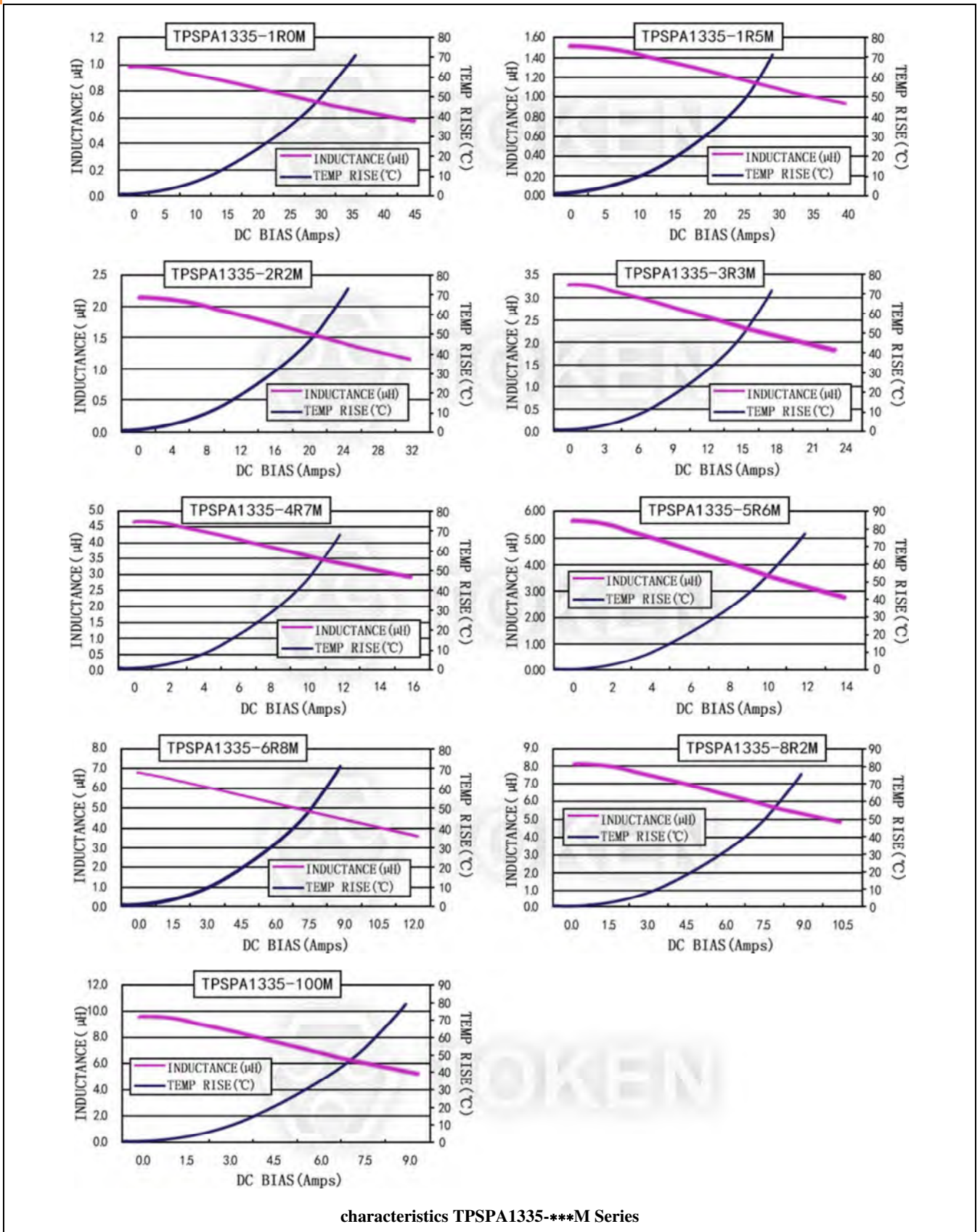


Current characteristics TPSPA1335-\*\*\*M Series





Current characteristics TPSPA1335-\*\*\*M Series



characteristics TPSPA1335-\*\*\*M Series





▶ 1350

**Electrical Characteristics (TPSPA1350)**

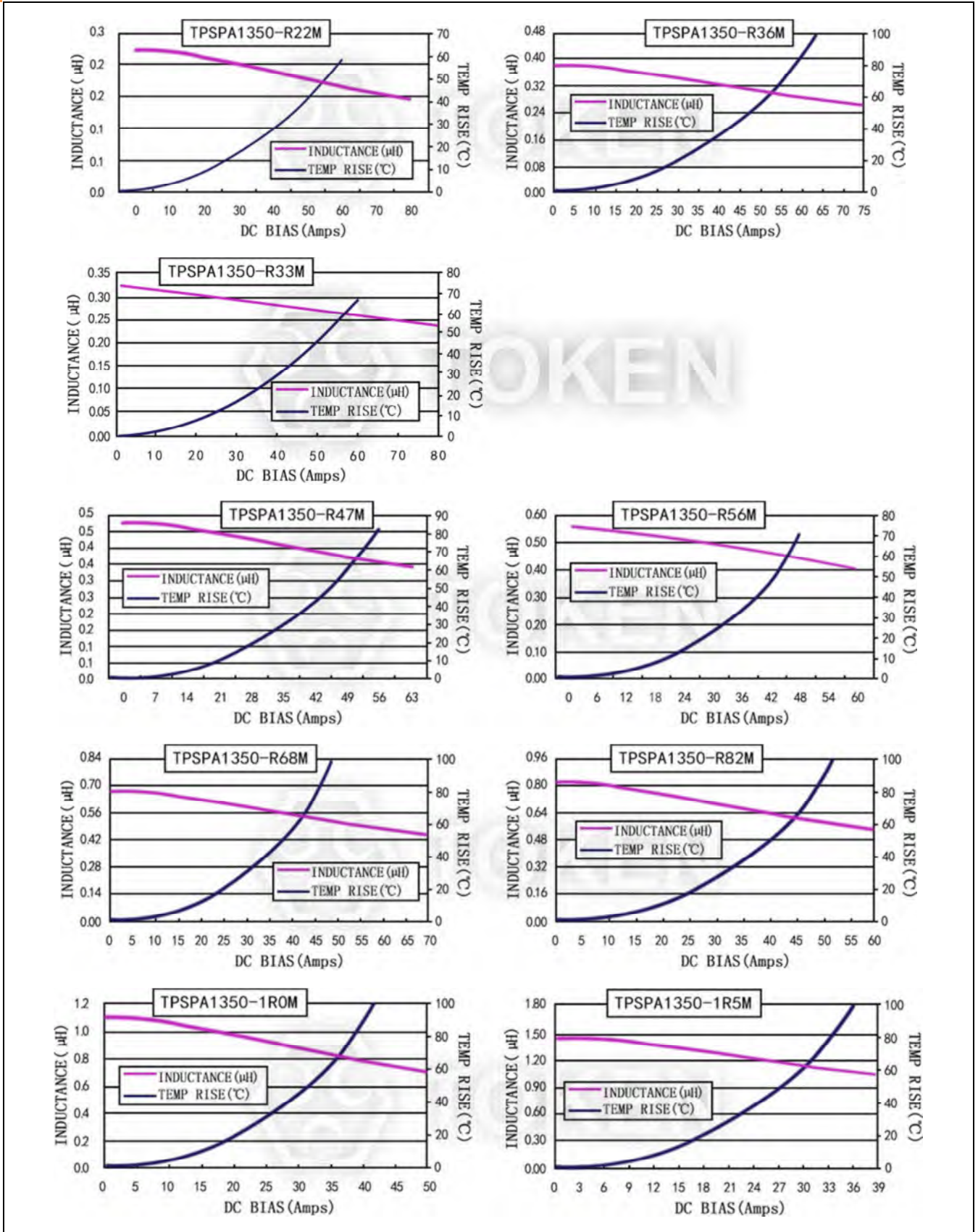
Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA1350-R22M	0.22	0.9	43.0	60.0
TPSPA1350-R33M	0.33	1.1	41.0	80.0
TPSPA1350-R36M	0.36	1.1	41.0	60.0
TPSPA1350-R47M	0.47	1.3	39.0	52.0
TPSPA1350-R56M	0.56	1.5	36.0	50.0
TPSPA1350-R68M	0.68	1.5	32.0	40.0
TPSPA1350-R82M	0.82	1.67	30.0	38.0
TPSPA1350-1R0M	1.00	2.2	26.0	35.0
TPSPA1350-1R5M	1.50	3.2	23.0	32.0
TPSPA1350-1R8M	1.80	3.2	23.0	27.0
TPSPA1350-2R2M	2.20	5.0	15.0	26.0
TPSPA1350-3R3M	3.30	9.0	13.0	22.0
TPSPA1350-4R7M	4.70	11.0	12.0	17.0
TPSPA1350-5R6M	5.60	15.0	11.0	16.0
TPSPA1350-6R8M	6.80	18.0	10.0	14.0
TPSPA1350-8R2M	8.20	20.0	9.0	13.0
TPSPA1350-100M	10.00	23.0	8.0	12.0
TPSPA1350-150M	15.00	32.0	5.0	10.0
TPSPA1350-220M	22.00	52.0	4.5	7.0
TPSPA1350-270M	27.00	66.0	4.0	6.3
TPSPA1350-330M	33.00	84.0	3.5	6.0
TPSPA1350-470M	47.00	120.0	3.0	5.0
TPSPA1350-680M	68.00	135.0	2.5	4.5

Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.

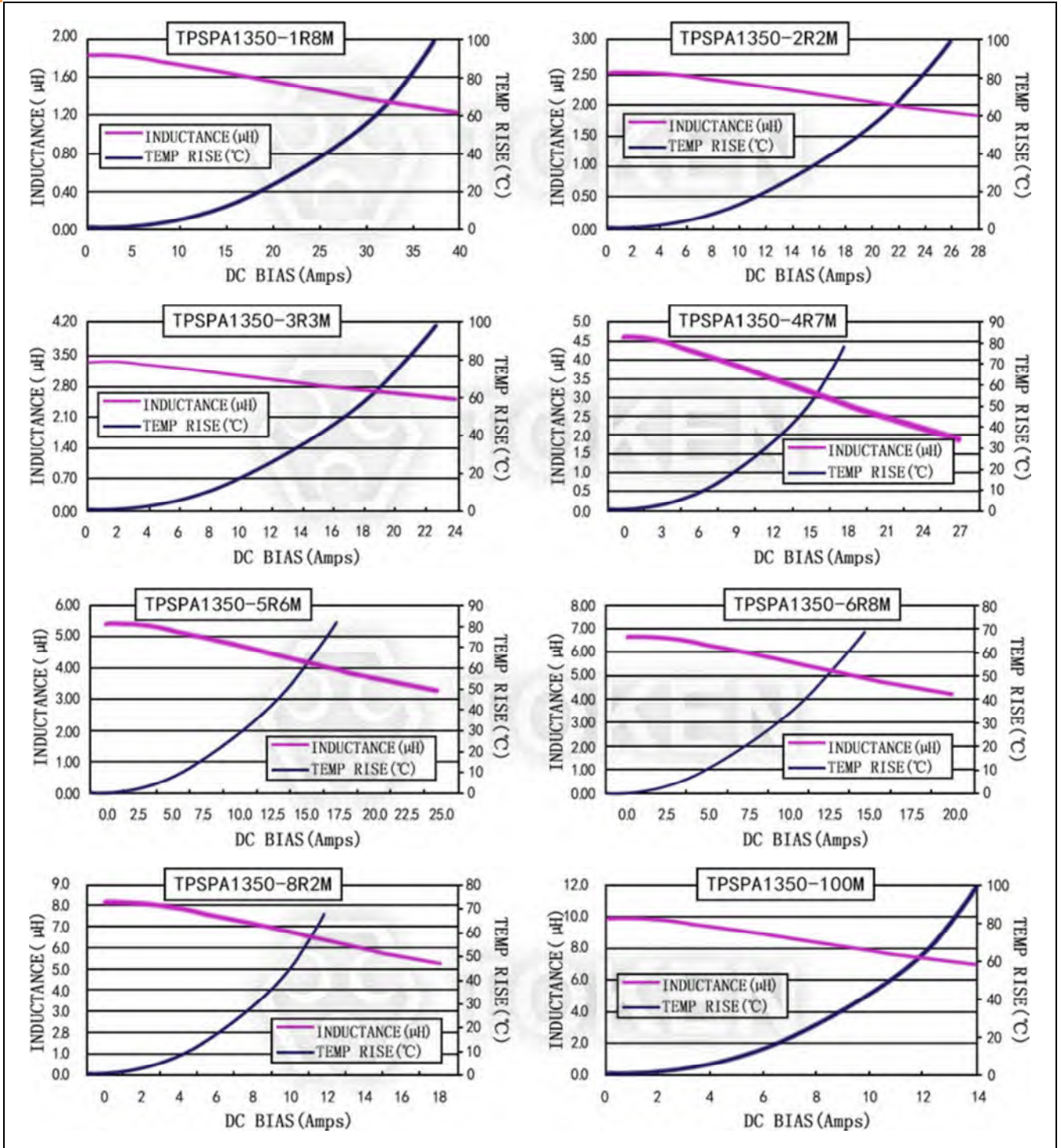


Current characteristics TPSPA1350-\*\*\*M Series



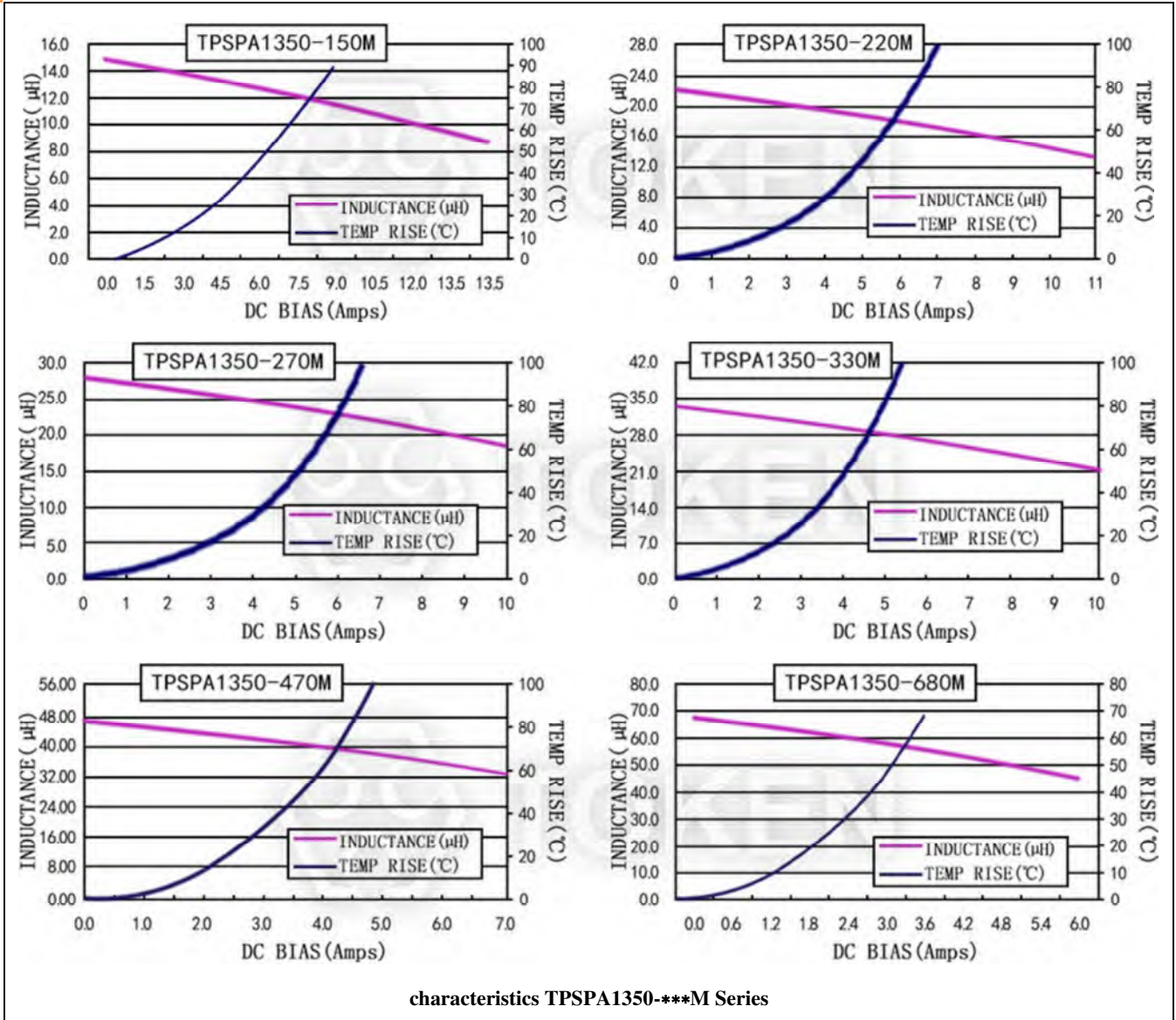


Current characteristics TPSPA1350-\*\*\*M Series





Current characteristics TPSPA1350-\*\*\*M Series



▶ 1360

**Electrical Characteristics (TPSPA1360)**

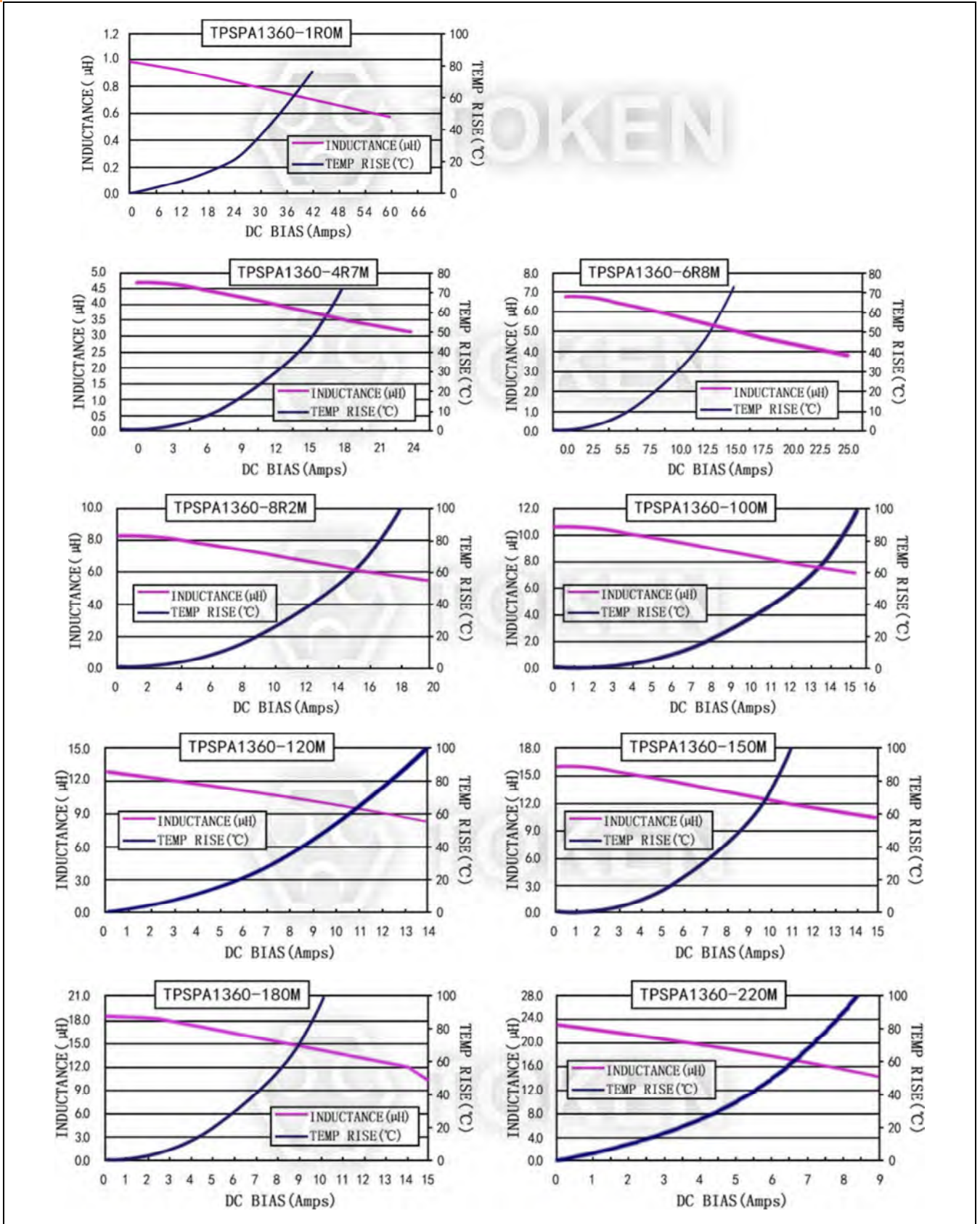
Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA1360-1R0M	1.00	1.7	30.0	35.0
TPSPA1360-4R7M	4.70	7.0	13.0	20.0
TPSPA1360-6R8M	6.80	13.8	12.0	15.0
TPSPA1360-8R2M	8.20	16.0	11.0	14.0
TPSPA1360-100M	10.00	20.7	10.0	13.0
TPSPA1360-120M	12.00	23.0	7.0	11.0
TPSPA1360-150M	15.00	29.0	6.0	9.0
TPSPA1360-180M	18.00	35.0	5.0	8.0
TPSPA1360-220M	22.00	39.5	5.0	7.5
TPSPA1360-270M	27.00	42.0	4.5	7.0
TPSPA1360-330M	33.00	70.0	4.0	6.0
TPSPA1360-470M	47.00	88.0	3.5	5.2
TPSPA1360-680M	68.00	125.0	3.3	5.0
TPSPA1360-820M	82.00	140.0	3.0	4.0
TPSPA1360-101M	100.00	150.0	2.5	3.5
TPSPA1360-121M	120.00	235.0	2.3	3.2
TPSPA1360-151M	150.00	350.0	2.0	2.7

Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.

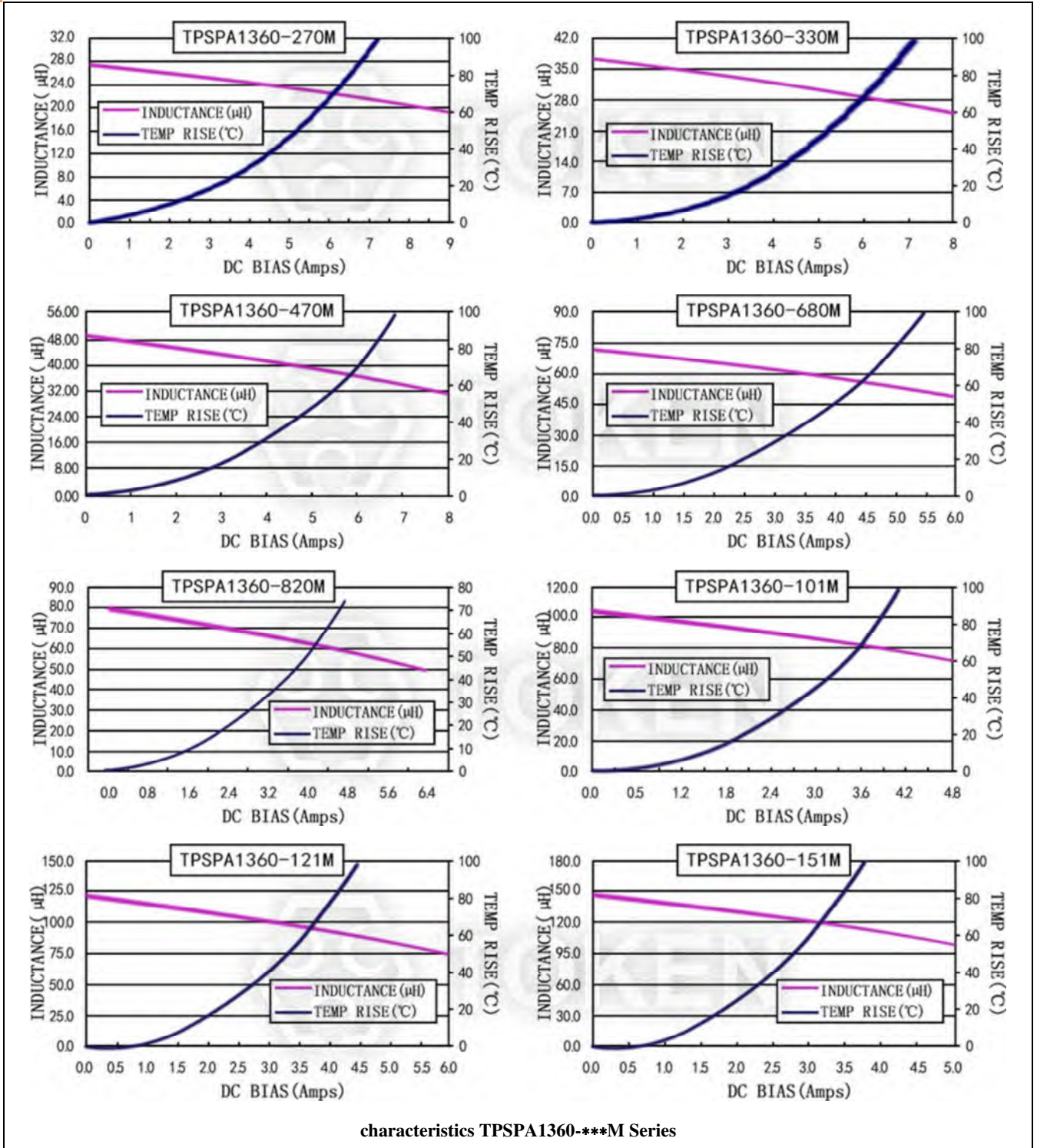


Current characteristics TPSPA1360-\*\*\*M Series





Current characteristics TPSPA1360-\*\*\*M Series



▶ 1365

**Electrical Characteristics (TPSPA1365)**

Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current Idc (A) Typical	Saturation Current Isat (A) Typical
		(Max)		
TPSPA1365-R50M	0.50	1.0	39.0	55.0
TPSPA1365-1R0M	1.00	1.67	30.0	35.0
TPSPA1365-1R5M	1.50	2.5	24.0	30.0
TPSPA1365-1R8M	1.80	2.5	24.0	28.0
TPSPA1365-2R2M	2.20	3.0	23.0	28.0
TPSPA1365-4R7M	4.70	7.0	13.0	18.0
TPSPA1365-100M	10.00	19.0	10.0	13.0
TPSPA1365-220M	22.00	36.0	5.0	7.5
TPSPA1365-330M	33.00	64.0	4.5	8.0
TPSPA1365-470M	47.00	82.0	4.0	6.0

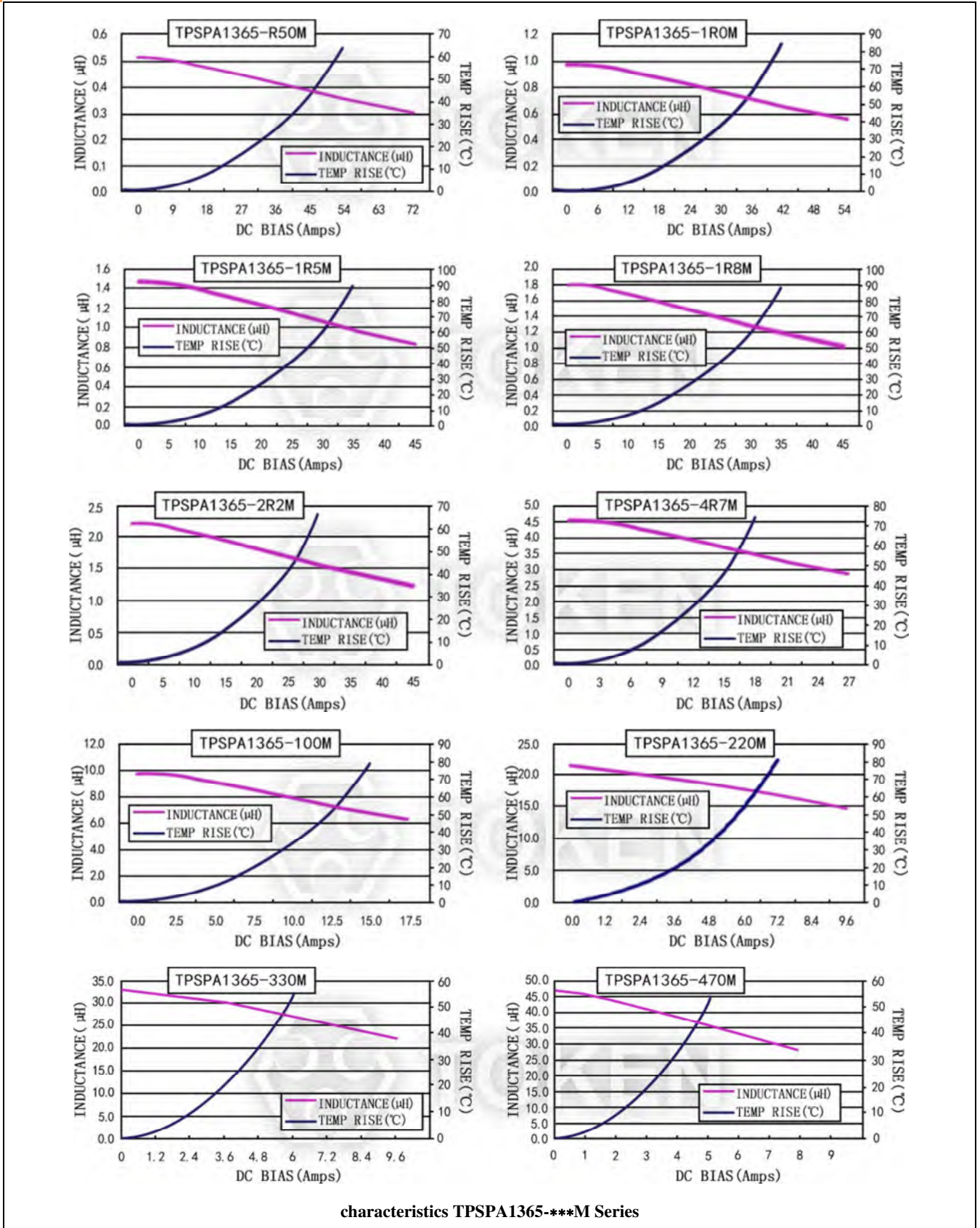
Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.





Current characteristics TPSPA1365-\*\*\*M Series





▶ 1770

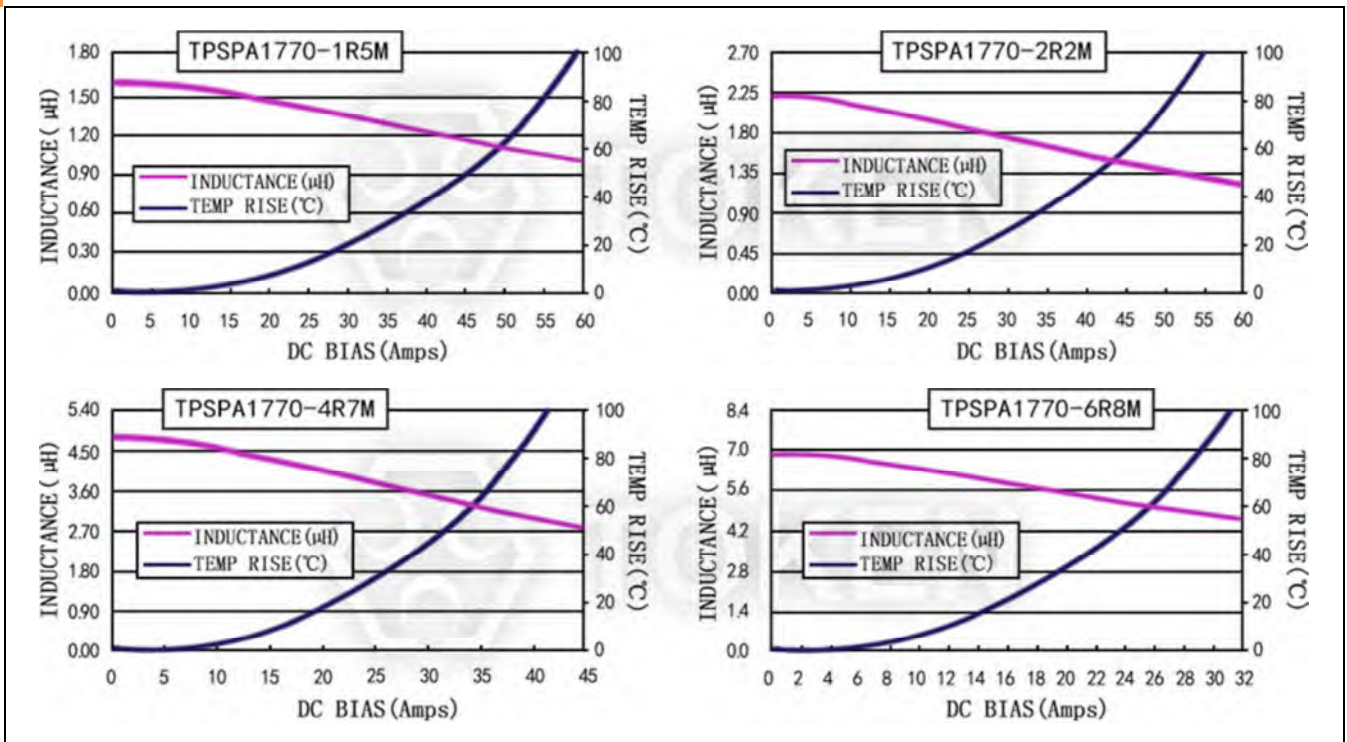
**Electrical Characteristics (TPSPA1770)**

Part Number	L0 Inductance (μH) @ (0A) ±20%	DCR (mΩ) @25°C	Heat Rating Current	Saturation Current
		(Max)	Idc (A) Typical	Isat (A) Typical
TPSPA1770-1R5M	1.50	2.15	40.0	40.0
TPSPA1770-2R2M	2.20	2.5	37.0	34.0
TPSPA1770-4R7M	4.70	4.72	27.0	24.0
TPSPA1770-6R8M	6.80	7.55	20.0	22.0
TPSPA1770-8R2M	8.20	8.7	16.0	20.0
TPSPA1770-100M	10.00	10.0	14.0	18.0
TPSPA1770-150M	15.00	15.5	12.0	13.0
TPSPA1770-200M	20.00	21.9	9.7	12.0
TPSPA1770-220M	22.00	23.0	9.5	11.0
TPSPA1770-330M	33.00	37.0	9.0	10.0
TPSPA1770-470M	47.00	47.0	6.8	7.5
TPSPA1770-680M	68.00	85.0	5.2	6.5

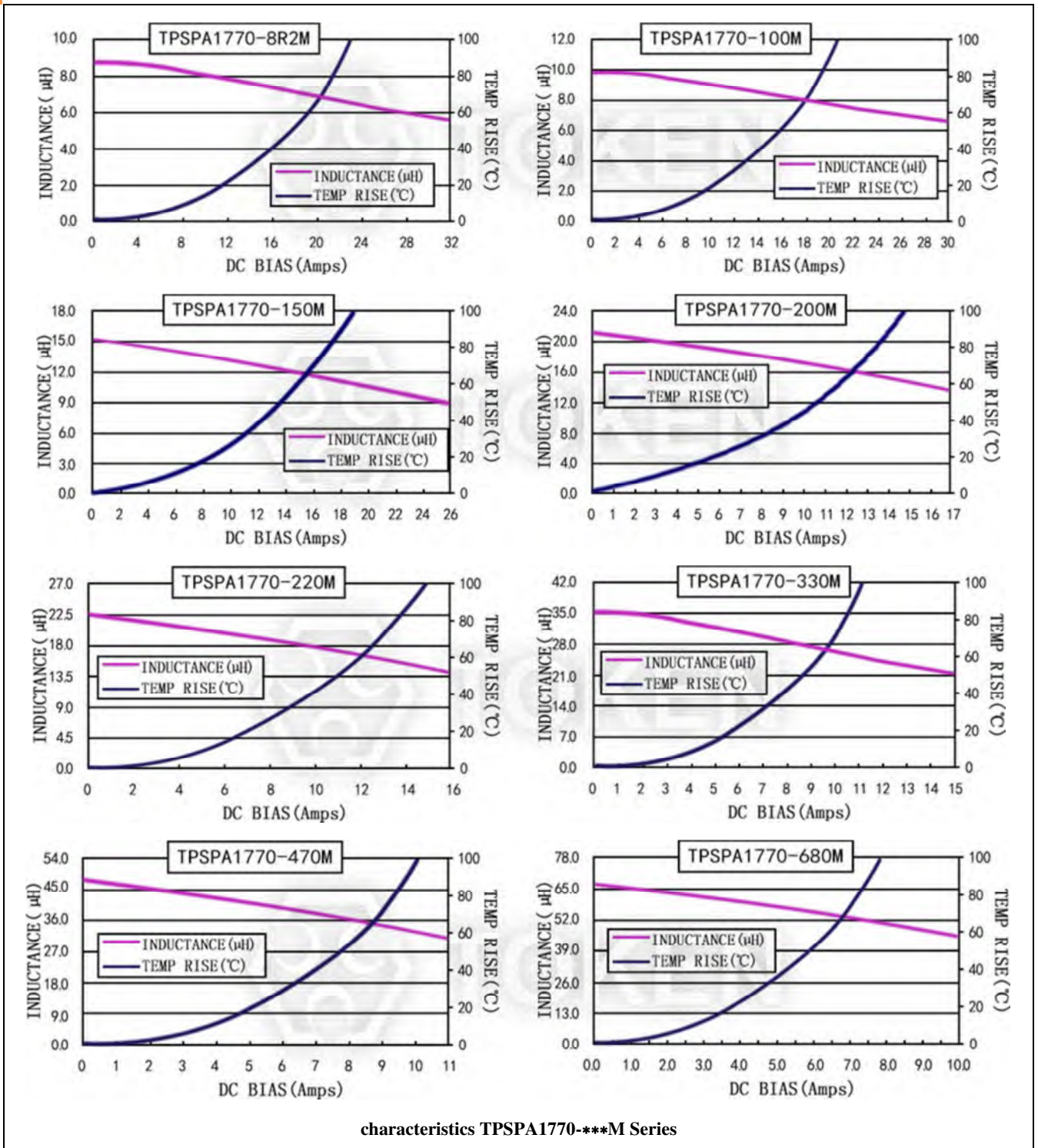
Note:

- Test frequency at 100KHZ / 1.0V.
- Idc (Irms): Current that causes a 40°C temperature rise from 25°C ambient.
- Isat: DC current at which the inductance drops 30% from its value without current.

**Current characteristics TPSPA1770-\*\*\*M Series**



Current characteristics TPSPA1770-\*\*\*M Series



▶ Order Codes

Order Codes (TPSPA)

TPSPA	0420		-	R10		M	
Part Number	Size (L×M)(mm)			Inductance		Tolerance	
TPSPA	0420	4.2×4.4		R10	0.10μH	J	± 5%
	0518	5.2×5.4		1R0	1.00μH	K	± 10%
	0530	5.2×5.4		100	10.00μH	L	± 15%
	0612	6.6×7.15		101	100.00μH	M	± 20%
	0615	6.6×7.15				P	± 25%
	0618	6.6×7.15				N	± 30%
	0624	6.6×7.15					
	0630	6.6×7.15					
	0650	6.6×7.15					
	1030	10.1×11.15					
	1040	10.85×10.00					
	1050	10.1×11.15					
	1335	12.6×13.65					
	1350	12.6×13.65					
	1360	12.6×13.65					
	1365	12.6×13.65					
	1770	17.15×17.15					



## ► General Information

### How to Quickly Search Inductor for all of the Characteristics?

#### Quickly Search Inductor Finder

Searching and comparing data sheets of inductor manufacturers can be time consuming. Token's Parameter Sorting Search Mode allows selection of inductors based on different parameters.

By entering just the inductance value,

By sorting parameter to narrow down searching range,

Or by enter keyword / part number / size dimensions L\*W\*H to partial or exact searching.

#### Leading-Edge Technology

Token Electronics brand passive component specializes in standard and custom solutions offering the latest in state-of-the-art low profile high power density inductor components. Token provides cost-effective, comprehensive solutions that meet the evolving needs of technology-driven markets. In working closely with the industry leaders in chipset and core development, we remain at the forefront of innovation and new technology to deliver the optimal mix of packaging, high efficiency and unbeatable reliability. Our designs utilize high frequency, low core loss materials, new and custom core shapes in combination with innovative construction and packaging to provide designers with the highest performance parts available on the market.

#### Find Inductor Solutions Faster

Find Your Inductor - [rfq@token.com.tw](mailto:rfq@token.com.tw)

Only timely and accurate information can help manage the changing needs of your customers. The Token Inductor Finder puts you only a click away from all of the inductor information you need.

Find Your Solution - [rfq@token.com.tw](mailto:rfq@token.com.tw)

Selecting the correct inductor solution will not only save you time, but it will give you a competitive edge. At Token, we are committed to helping you find the most efficient alternative for your power design. Our inductor and power supply design experts can help you make that selection.

Please forward us:

- A brief description of your particular application's requirements.
- Details of an existing solution that you'd like to replace, enhance or find an alternative.
- Inquiries for feasibility to tailor a power transformer or inductor to your specific application.

We can also help you with any additional technical information you might need relating to any of our products.

**Ask Us Today**

