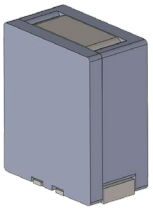
TLVR Power Inductor

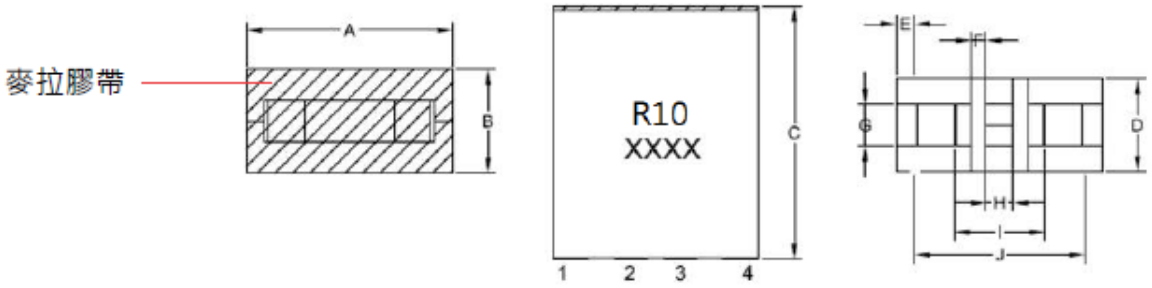


APPLICATIONS	VR 14 power supply system Fast multi-phase trans inductor voltage regulator

PRODUCT IDENTIFICATION	**FRPE**	**100512**	**A**	-	**R20**	**L**
	(1)	**(2)**	**(3)**		**(4)**	**(5)**

(1) PRODUCT NAME
(2) DIMENSION
(3) TYPE CODE
(4) INDUCTOR CODE
(5) INDUCTOR TOLERANCE CODE

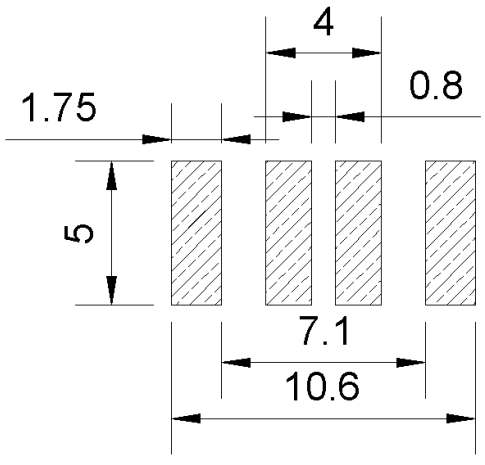
CONFIGURATIONS & DIMENSIONS (unit in mm)



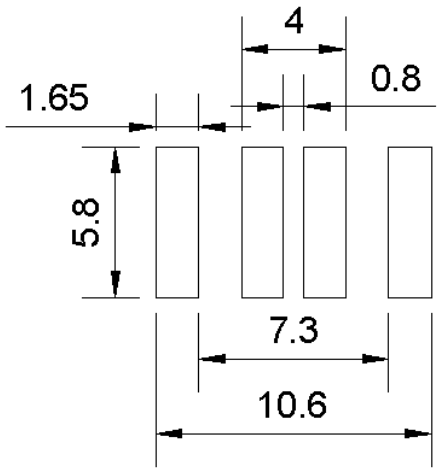
Type	A/mm	B/mm	C/mm	D/mm	E/mm
FRPE100512A	10.0max	5.0max	12.0max	4.5±0.3	0.9±0.3
	F/mm	G/mm	H/mm	I/mm	J/mm
	0.73	2.0	1.3	4.4	7.8

Recommended Soldering Condition (unit in mm)

Suggested PWB Layout



Suggested Stencil



TLVR Power Inductor

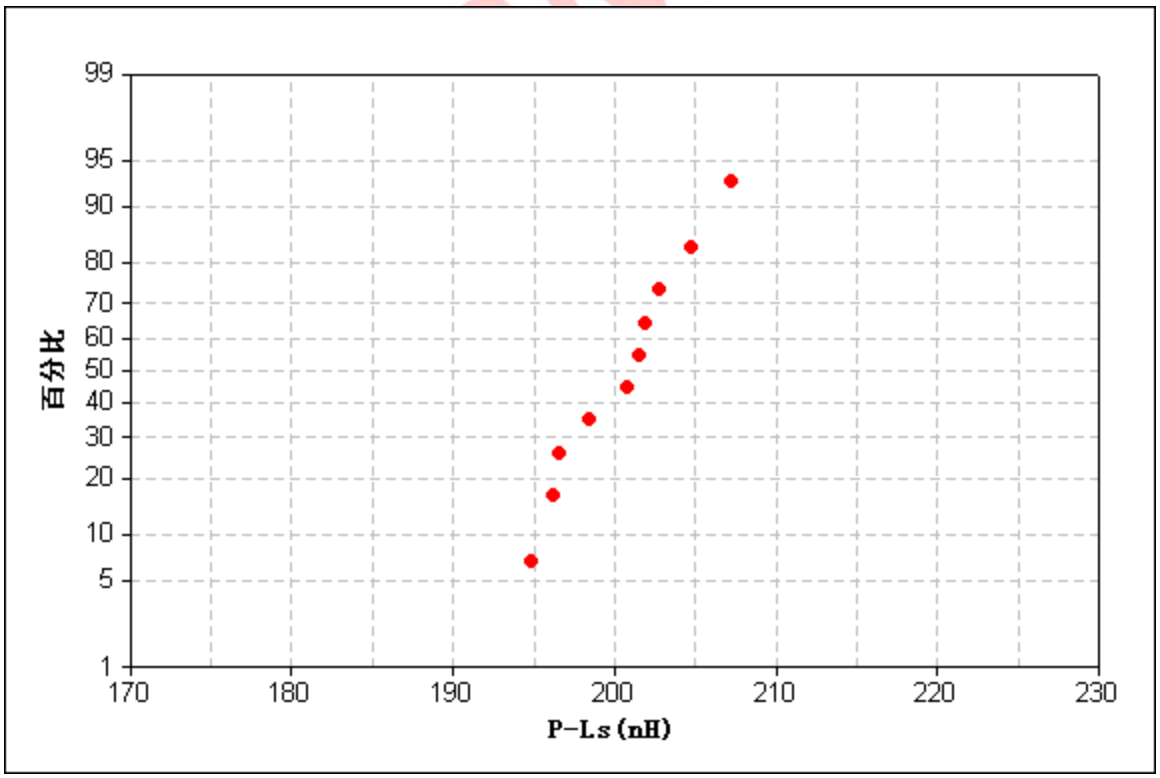
Part Number	P-Ls	RDC(P)	RDC(S)	P- I RMS (Typ.)	S - I RMS (Typ.)
FRPE100512A-R20L	200nH± 15%	0.15 m Ω± 10%	0.56 m Ω± 10%	70 A	36 A
	P- I SAT (Typ.)	P- I SAT (Typ.)	P- I SAT (Typ.)	L@ P - I SAT Min	
	25°C	100°C	125°C		
	35A	30A	30A	156nH	

ELECTRICAL CHARACTERISTICS FOR FRPE 100512A-R10L SERIES

Operating Temperature Range : -40℃ to + 125 ℃ (Including self-temperature rise)

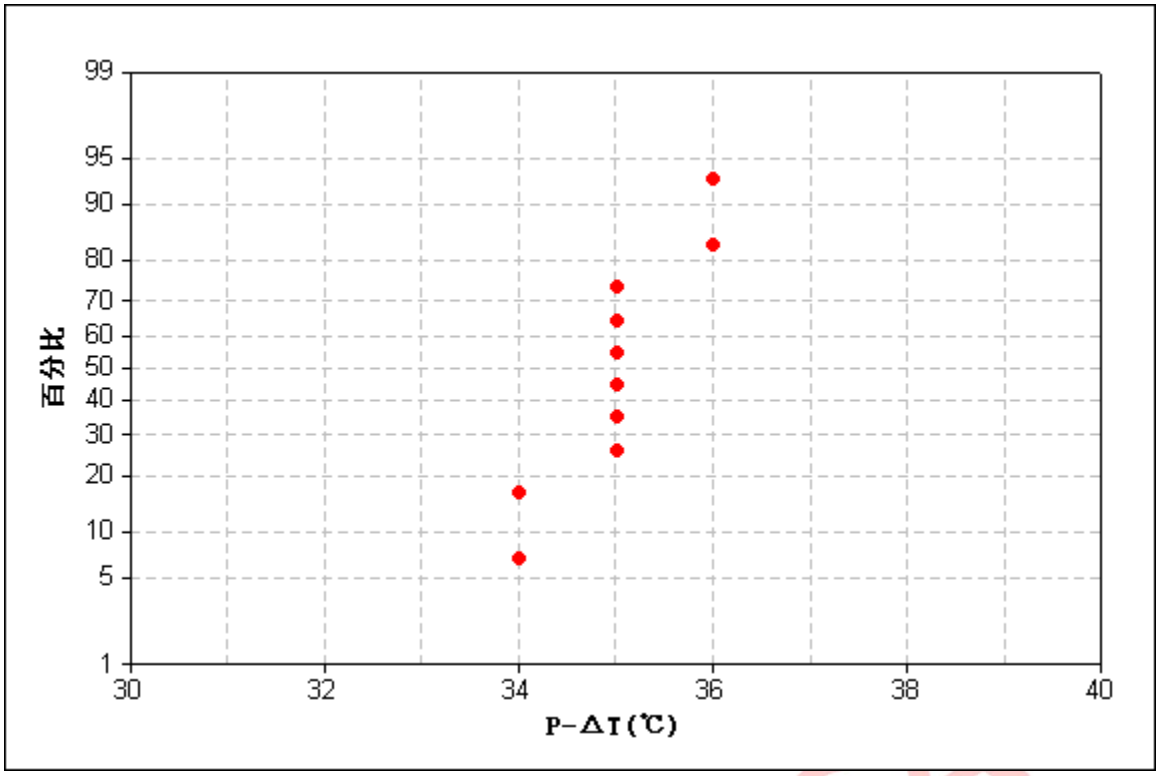
Storage Temperature Range : Store this product under the condition of -40℃ to 85℃, 20% to 75 %RH and use within 6 months.

Test Data (Ls 、Irms 、RDC 、Isat)



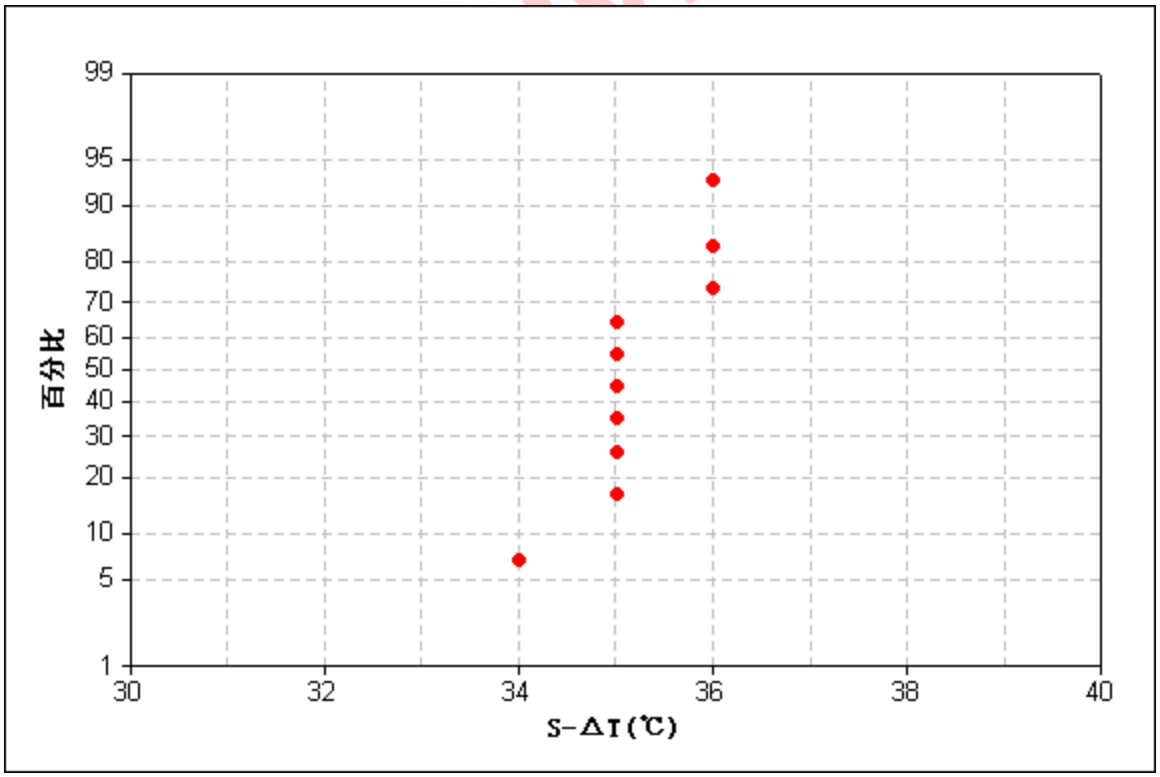
	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
P-Ls(nH)	198.4	201.5	194.8	204.7	196.5	201.8	207.2	202.7	196.1	200.8

Note：200nH±15%@100kHz,1.0V



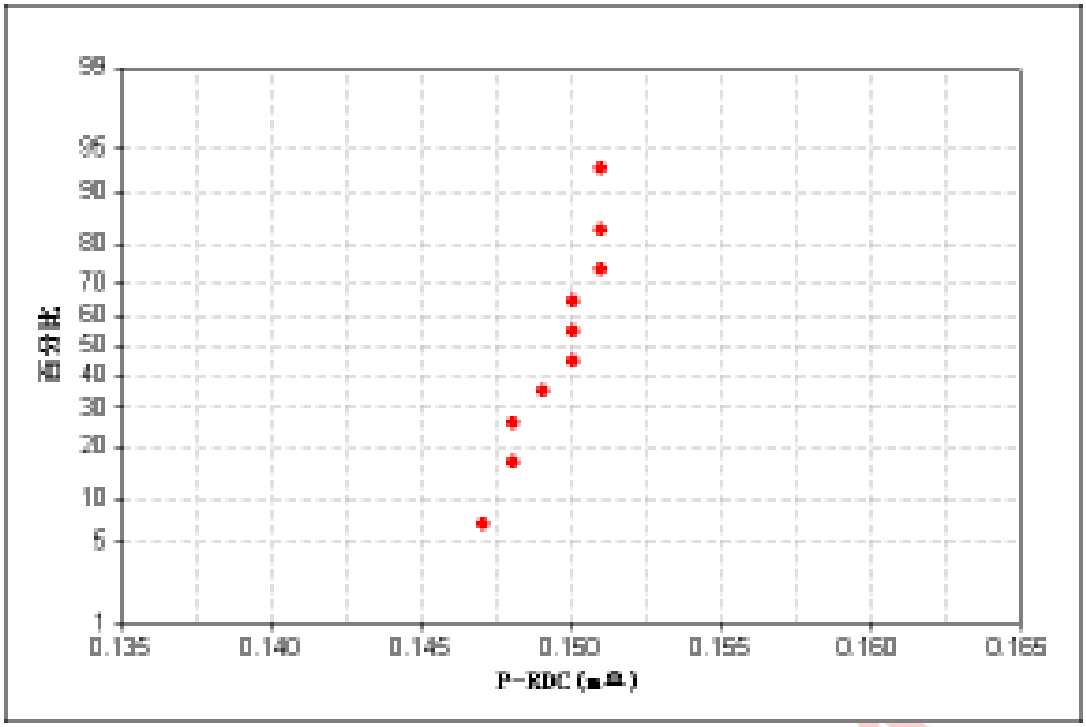
	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
P-△T(℃)	35	35	34	35	36	35	35	34	36	35

Note：△ T40 ℃@ P-IRMS-70A



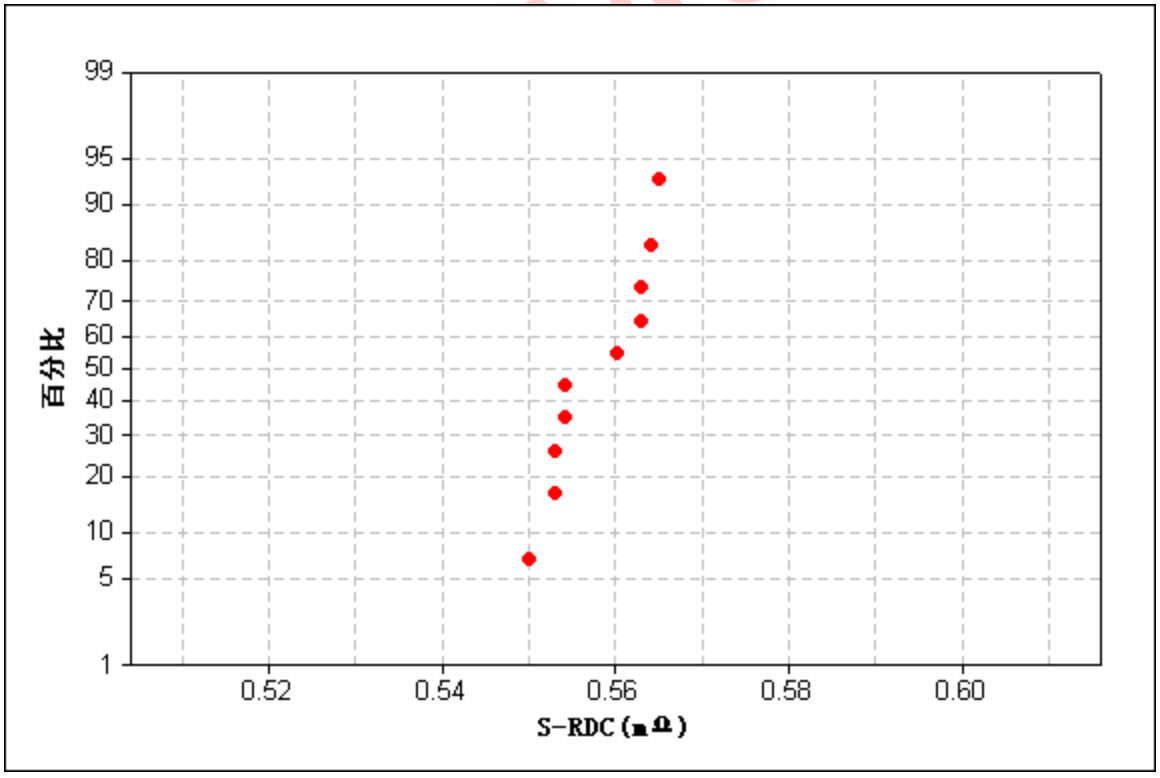
	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
S-△T(℃)	35	34	35	36	35	35	36	35	36	35

Note：△T 40℃@ S-IRMS-36A



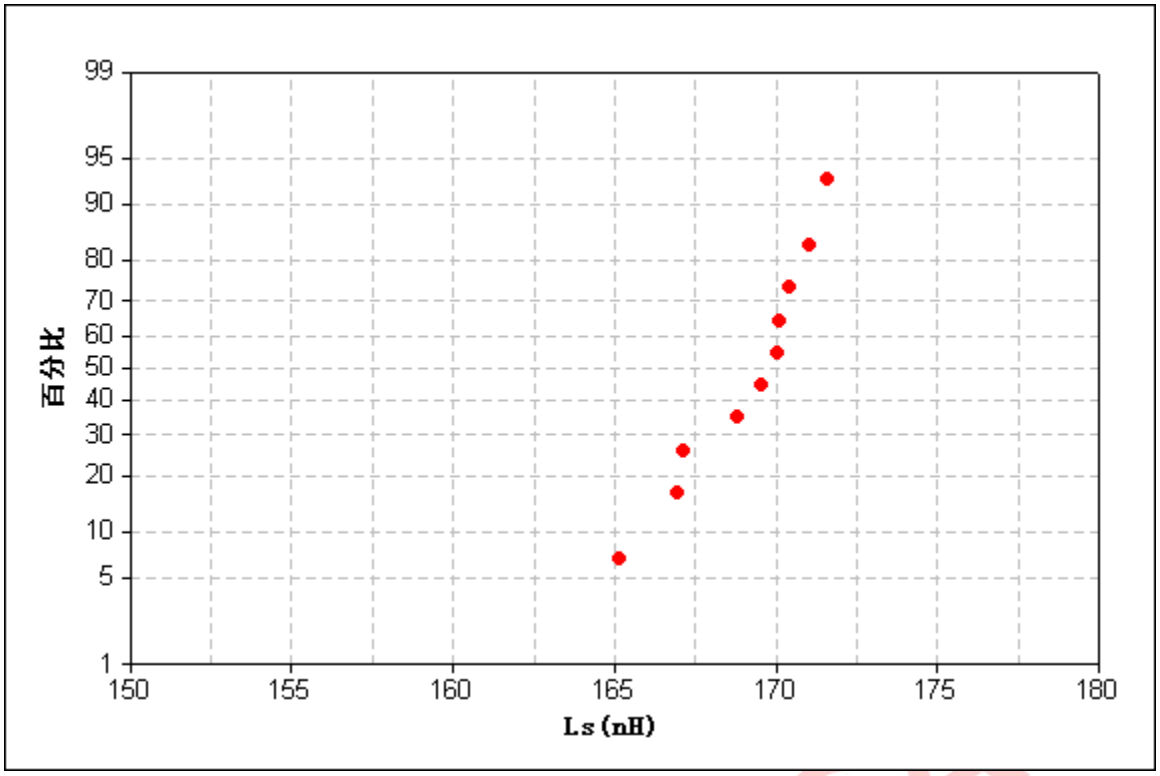
	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
P-RDC(mΩ)	0.151	0.148	0.151	0.150	0.149	0.151	0.150	0.148	0.150	0.147

Note：DC Resistance(RDC)@25℃-0.15mΩ±10%



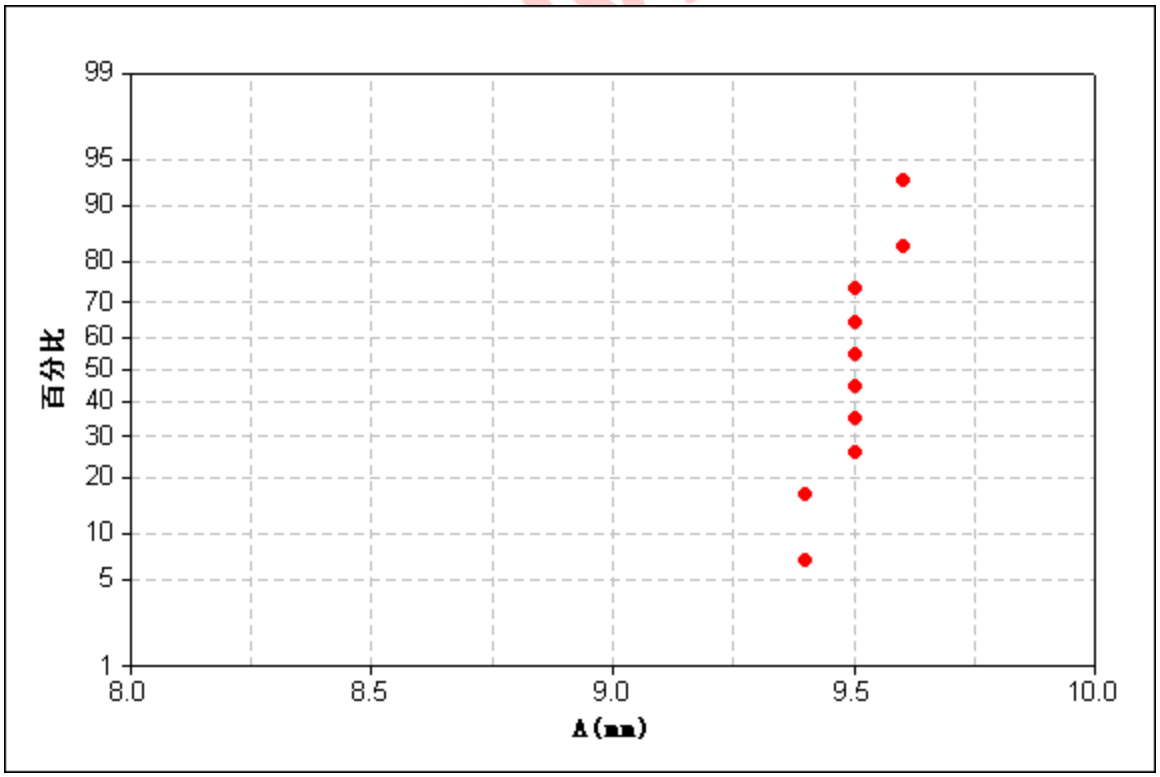
	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
S-RDC(mΩ)	0.555	0.573	0.570	0.540	0.570	0.558	0.561	0.574	0.547	0.553

Note：DC Resistance(RDC)@25℃-0.56mΩ±10%



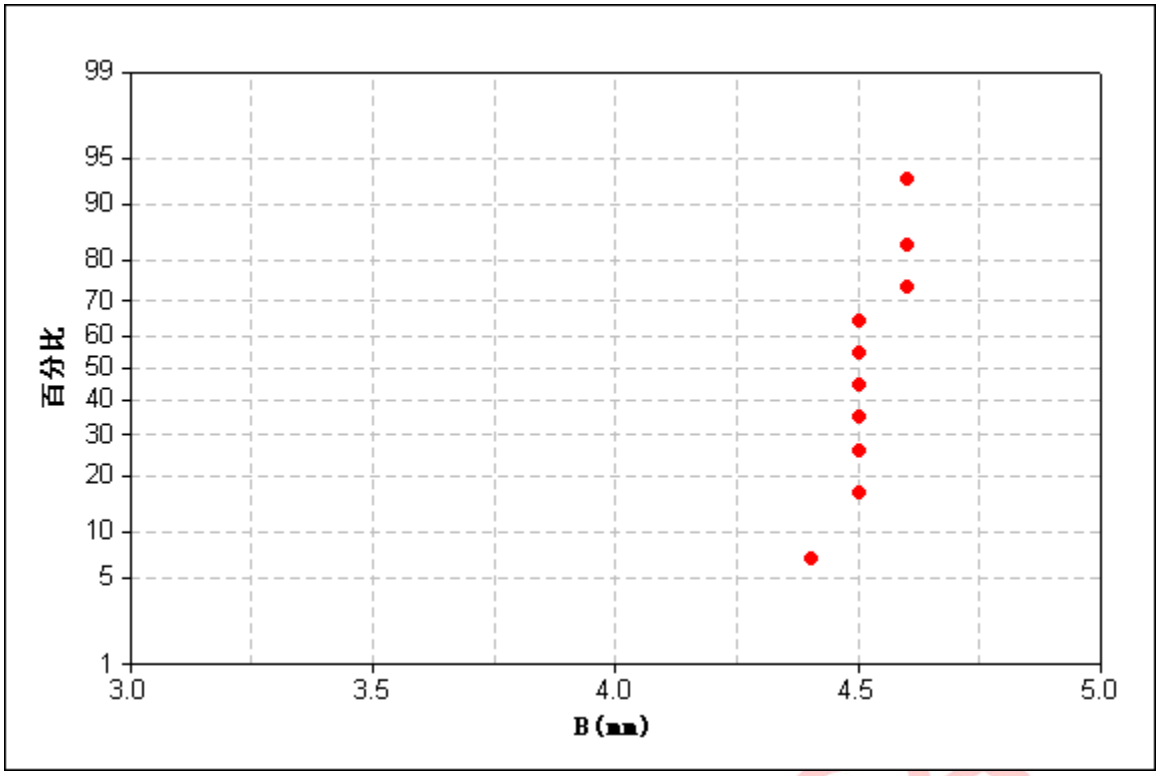
	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
Ls (nH)	169.5	170.4	171.6	170.0	167.1	166.9	168.8	171.0	165.1	170.1

Note：Saturation Current for Inductance drop 2 0% @35 A(Typ.)



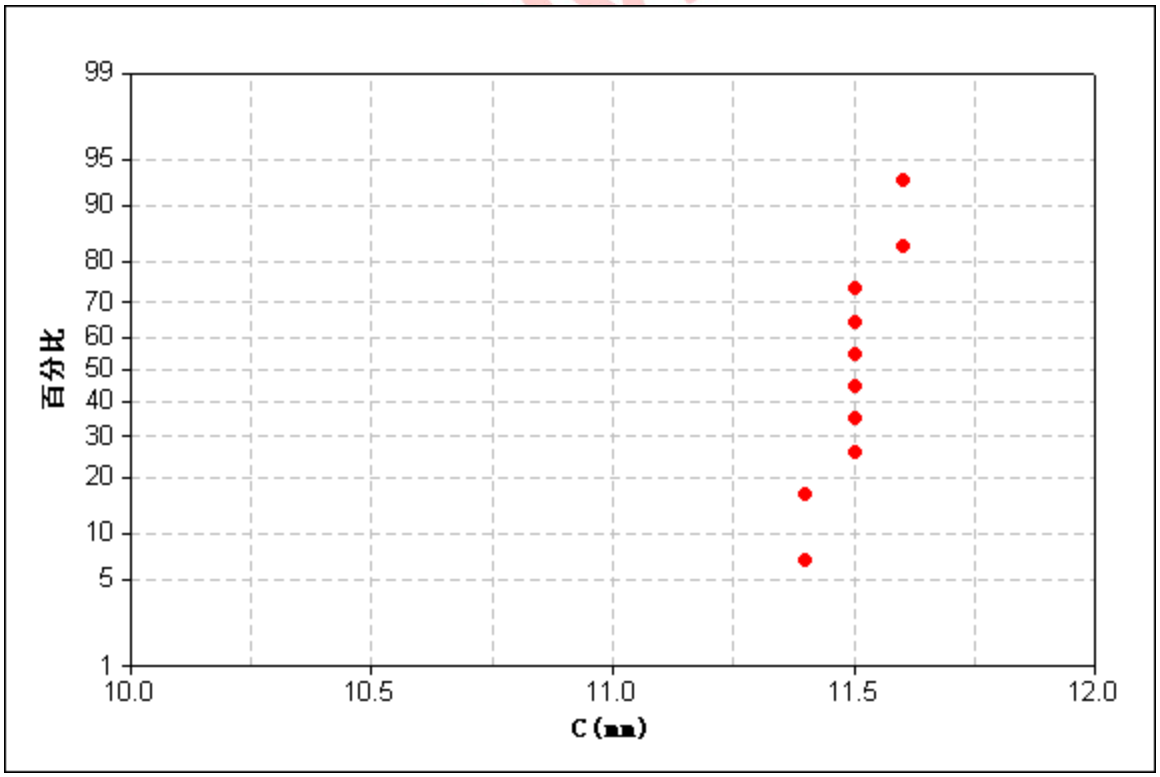
	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
A (mm)	9.5	9.6	9.5	9.4	9.5	9.5	9.6	9.4	9.5	9.5

Note：DimensionsA@10.0mm(max)



	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
B (mm)	4.5	4.6	4.5	4.4	4.6	4.5	4.5	4.6	4.5	4.5

Note：Dimensions B @ 5.0mm(max)



	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10
C (mm)	11.5	11.5	11.6	11.4	11.5	11.4	11.5	11.5	11.5	11.6

Note：Dimensions C @ 12.0mm(max)

Typical Electrical Curve