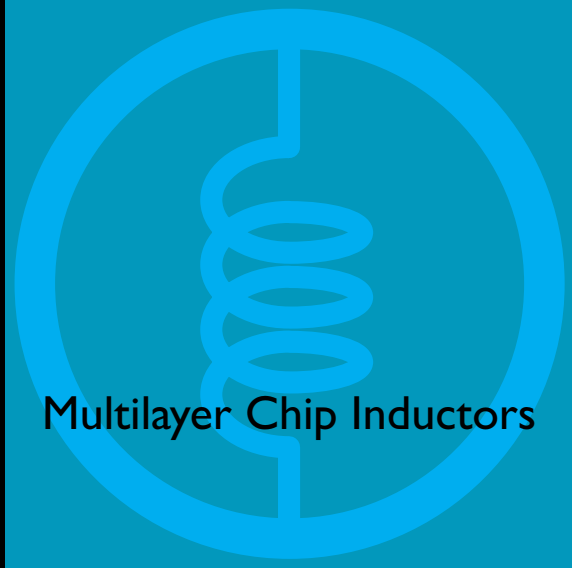


CL Series

Multilayer Chip Inductors



APPLICATIONS

For Main Board, CD-ROM, Hard Disk Driver, Wireless Phone, Pager and other related devices.

OUTLINE

Chilisin multilayer chip inductor is formed without a wound wire and has a closed magnetic circuit formed by simultaneous forming of alternative layers of ferrite paste and conductor paste.

However this multilayer chip inductor results in magnetic shielding the absence of leakage flux makes it most suitable for high density mounting.

FEATURES

These components are standard SMD parts and specially designed for flow and reflow soldering.

Specially designed for surface mounting equipment, available in various size which allows them to wide rang of application and usage.

PACKAGING QUANTITY

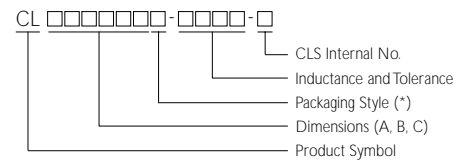
TYPE	BULK	CHIP/REEL
CL160808	√	4000
CL160812	√	4000
CL201209	√	4000
CL201212	√	3000
CL321611	√	3000

SHAPES AND DIMENSIONS

TYPE	A	B	C	D
CL160808	1.6 ± 0.15	0.80 ± 0.15	0.8 ± 0.15	0.3 ± 0.2
CL201209	2.0 ± 0.20	1.25 ± 0.20	0.9 ± 0.20	0.5 ± 0.3
CL201212	2.0 ± 0.20	1.25 ± 0.20	1.25 ± 0.20	0.5 ± 0.3
CL321611	3.2 ± 0.20	1.60 ± 0.20	1.10 ± 0.20	0.5 ± 0.3

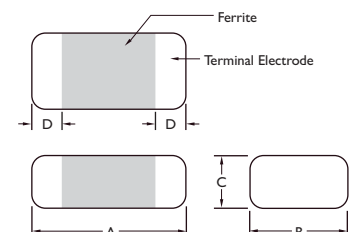


PRODUCT IDENTIFICATION



* B: Bulk ; T: Tape and Reel

Dimensions : mm





ELECTRICAL CHARACTERISTICS CL160808 (0603) SERIES

PART NO.	INDUCTANCE (μ H)	Q Min.	L, Q TEST FREQUENCY (MHz)	SELF RESONANT FREQUENCY (MHz) Min.	DC RESISTANCE RDC (Ω) Max.	IDC (mA) Max.
CL160808T-47NM-S	0.047 \pm 20%	20	50	260	0.30	50
CL160808T-68NM-S	0.068 \pm 20%	20	50	250	0.30	50
CL160808T-82NM-S	0.082 \pm 20%	20	50	245	0.30	50
CL160808T-R10□-S	0.10 \pm 20 or 10%	30	25	240	0.50	50
CL160808T-R12□-S	0.12 \pm 20 or 10%	30	25	205	0.50	50
CL160808T-R15□-S	0.15 \pm 20 or 10%	30	25	180	0.60	50
CL160808T-R18□-S	0.18 \pm 20 or 10%	30	25	165	0.60	50
CL160808T-R22□-S	0.22 \pm 20 or 10%	30	25	150	0.80	50
CL160808T-R27□-S	0.27 \pm 20 or 10%	30	25	136	0.80	50
CL160808T-R33□-S	0.33 \pm 20 or 10%	30	25	125	0.85	35
CL160808T-R39□-S	0.39 \pm 20 or 10%	30	25	110	1.00	35
CL160808T-R47□-S	0.47 \pm 20 or 10%	30	25	105	1.35	35
CL160808T-R56□-S	0.56 \pm 20 or 10%	30	25	95	1.55	35
CL160808T-R68□-S	0.68 \pm 20 or 10%	30	25	85	1.70	35
CL160808T-R82□-S	0.82 \pm 20 or 10%	30	25	75	2.10	35
CL160808T-1R0□-S	1.0 \pm 20 or 10%	35	10	65	0.60	25
CL160808T-1R2□-S	1.2 \pm 20 or 10%	35	10	60	0.80	25
CL160808T-1R5□-S	1.5 \pm 20 or 10%	35	10	55	0.80	25
CL160808T-1R8□-S	1.8 \pm 20 or 10%	35	10	50	0.95	25
CL160808T-2R2□-S	2.2 \pm 20 or 10%	35	10	45	1.15	15
CL160808T-2R7□-S	2.7 \pm 20 or 10%	35	10	40	1.35	15
CL160808T-3R3□-S	3.3 \pm 20 or 10%	35	10	38	1.55	15
CL160808T-3R9□-S	3.9 \pm 20 or 10%	35	10	36	1.70	15
CL160808T-4R7□-S	4.7 \pm 20 or 10%	35	10	33	2.10	15
CL160808T-5R6□-S	5.6 \pm 20 or 10%	35	4	22	1.55	5
CL160808T-6R8□-S	6.8 \pm 20 or 10%	35	4	20	1.70	5
CL160812T-8R2□-S	8.2 \pm 20 or 10%	30	4	18	2.10	5
CL160812T-100□-S	10 \pm 20 or 10%	30	2	17	2.55	5

ELECTRICAL CHARACTERISTICS CL201209, CL201212 (0805) SERIES

PART NO.	INDUCTANCE (μ H)	Q Min.	L, Q TEST FREQUENCY (MHz)	SELF RESONANT FREQUENCY (MHz) Min.	DC RESISTANCE RDC (Ω) Max.	IDC (mA) Max.
CL201209T-47NM-S	0.047 \pm 20%	25	50	320	0.20	300
CL201209T-68NM-S	0.068 \pm 20%	25	50	280	0.20	300
CL201209T-82NM-S	0.082 \pm 20%	25	50	255	0.20	300
CL201209T-R10□-S	0.10 \pm 20 or 10%	30	25	235	0.30	250
CL201209T-R12□-S	0.12 \pm 20 or 10%	30	25	220	0.30	250
CL201209T-R15□-S	0.15 \pm 20 or 10%	30	25	200	0.40	250
CL201209T-R18□-S	0.18 \pm 20 or 10%	30	25	185	0.40	250
CL201209T-R22□-S	0.22 \pm 20 or 10%	30	25	170	0.50	250
CL201209T-R27□-S	0.27 \pm 20 or 10%	30	25	150	0.50	250
CL201209T-R33□-S	0.33 \pm 20 or 10%	30	25	145	0.55	250
CL201209T-R39□-S	0.39 \pm 20 or 10%	30	25	135	0.65	250
CL201209T-R47□-S	0.47 \pm 20 or 10%	30	25	125	0.65	250
CL201209T-R56□-S	0.56 \pm 20 or 10%	30	25	115	0.75	150
CL201209T-R68□-S	0.68 \pm 20 or 10%	30	25	105	0.80	150
CL201209T-R82□-S	0.82 \pm 20 or 10%	30	25	100	1.00	150
CL201209T-1R0□-S	1.0 \pm 20 or 10%	45	10	75	0.45	50
CL201209T-1R2□-S	1.2 \pm 20 or 10%	45	10	65	0.50	50
CL201209T-1R5□-S	1.5 \pm 20 or 10%	45	10	60	0.50	50
CL201209T-1R8□-S	1.8 \pm 20 or 10%	45	10	55	0.60	50
CL201209T-2R2□-S	2.2 \pm 20 or 10%	45	10	50	0.65	30
CL201212T-2R7□-S	2.7 \pm 20 or 10%	45	10	45	0.75	30
CL201212T-3R3□-S	3.3 \pm 20 or 10%	45	10	41	0.80	30
CL201212T-3R9□-S	3.9 \pm 20 or 10%	45	10	38	0.90	30
CL201212T-4R7□-S	4.7 \pm 20 or 10%	45	10	35	1.00	30
CL201212T-5R6□-S	5.6 \pm 20 or 10%	45	4	32	0.90	15
CL201212T-6R8□-S	6.8 \pm 20 or 10%	45	4	29	1.00	15
CL201212T-8R2□-S	8.2 \pm 20 or 10%	45	4	26	1.10	15
CL201212T-100□-S	10 \pm 20 or 10%	45	2	24	1.15	15
CL201212T-120□-S	12 \pm 20 or 10%	45	2	22	1.25	15
CL201212T-150□-S	15 \pm 20 or 10%	30	1	19	0.80	5
CL201212T-180□-S	18 \pm 20 or 10%	30	1	18	0.90	5

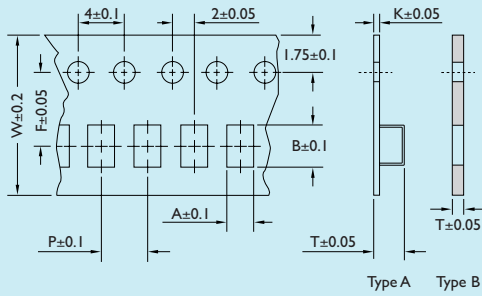


ELECTRICAL CHARACTERISTICS CL321611 SERIES

PART NO.	INDUCTANCE (μ H)	Q Min.	L, Q TEST FREQUENCY (MHZ)	SELF RESONANT FREQUENCY Min. (MHZ)	DC RESISTANCE RDC Max. (Ω)	IDC Max. (mA)
CL321611T-47NM-S	0.047 \pm 20%	25	50	320	0.15	300
CL321611T-68NM-S	0.068 \pm 20%	25	50	280	0.25	300
CL321611T-82NM-S	0.082 \pm 20%	25	50	250	0.25	300
CL321611T-R10□-S	0.10 \pm 20 or 10%	30	25	235	0.25	250
CL321611T-R12□-S	0.12 \pm 20 or 10%	30	25	220	0.30	250
CL321611T-R15□-S	0.15 \pm 20 or 10%	30	25	200	0.30	250
CL321611T-R18□-S	0.18 \pm 20 or 10%	30	25	185	0.40	250
CL321611T-R22□-S	0.22 \pm 20 or 10%	30	25	170	0.40	250
CL321611T-R27□-S	0.27 \pm 20 or 10%	30	25	150	0.50	250
CL321611T-R33□-S	0.33 \pm 20 or 10%	30	25	145	0.60	250
CL321611T-R39□-S	0.39 \pm 20 or 10%	30	25	135	0.60	200
CL321611T-R47□-S	0.47 \pm 20 or 10%	30	25	125	0.60	200
CL321611T-R56□-S	0.56 \pm 20 or 10%	30	25	115	0.70	150
CL321611T-R68□-S	0.68 \pm 20 or 10%	30	25	105	0.80	150
CL321611T-R82□-S	0.82 \pm 20 or 10%	30	25	100	0.90	150
CL321611T-1R0□-S	1.0 \pm 20 or 10%	45	10	75	0.40	100
CL321611T-1R2□-S	1.2 \pm 20 or 10%	45	10	65	0.50	100
CL321611T-1R5□-S	1.5 \pm 20 or 10%	45	10	60	0.50	80
CL321611T-1R8□-S	1.8 \pm 20 or 10%	45	10	55	0.50	70
CL321611T-2R2□-S	2.2 \pm 20 or 10%	45	10	50	0.60	60
CL321611T-2R7□-S	2.7 \pm 20 or 10%	45	10	45	0.60	60
CL321611T-3R3□-S	3.3 \pm 20 or 10%	45	10	41	0.70	60
CL321611T-3R9□-S	3.9 \pm 20 or 10%	45	10	38	0.80	50
CL321611T-4R7□-S	4.7 \pm 20 or 10%	45	10	35	0.90	50
CL321611T-5R6□-S	5.6 \pm 20 or 10%	45	4	32	0.70	25
CL321611T-6R8□-S	6.8 \pm 20 or 10%	45	4	29	0.80	25
CL321611T-8R2□-S	8.2 \pm 20 or 10%	45	4	26	0.90	25
CL321611T-100□-S	10 \pm 20 or 10%	45	2	24	1.00	25
CL321611T-120□-S	12 \pm 20 or 10%	45	2	22	1.05	15
CL321611T-150□-S	15 \pm 20 or 10%	35	1	19	0.70	5
CL321611T-180□-S	18 \pm 20 or 10%	35	1	18	0.75	5

TAPE DIMENSIONS

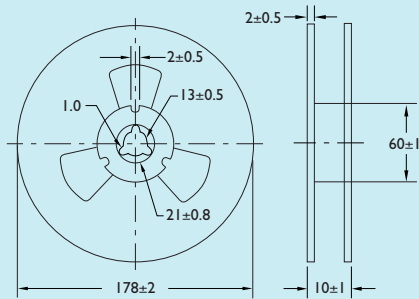
Dimensions : mm



TYPE	A	B	T	W	P	F	K	TAPE TYPE
CL160808	1.1	1.9	0.95	8.0	4.0	3.5	-	B
CL160812	0.95	1.75	1.35	8.0	4.0	3.5	0.2	A
CL201209	1.54	2.32	1.15	8.0	4.0	3.5	0.2	A
CL201212	1.54	2.32	1.35	8.0	4.0	3.5	0.2	A
CL321611	1.94	3.54	1.29	8.0	4.0	3.5	0.2	A

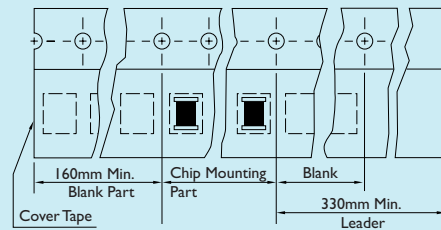
REEL DIMENSIONS

Dimensions : mm



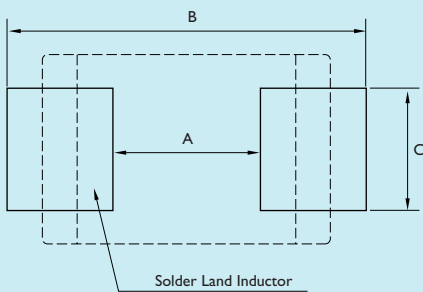
TAPE MATERIAL

Carrier Tape : Polystyrene (for 201209, 201212, 321611 Series), Paper (for 160808)
 Cover Type : Polyethyiene



RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C
CL160808	0.8	2.4 ~ 3.4	0.6
CL160812	0.8	2.4 ~ 3.4	0.6
CL201209	1.2	3.0 ~ 4.0	1.0
CL201212	1.2	3.0 ~ 4.0	1.0
CL321611	2.0	4.2 ~ 5.2	1.2

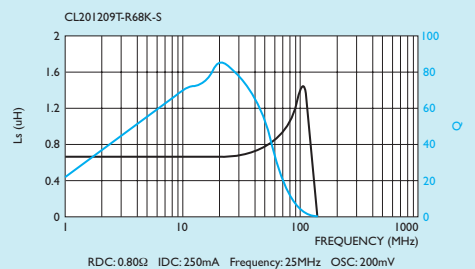
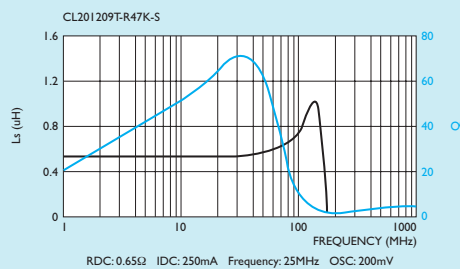
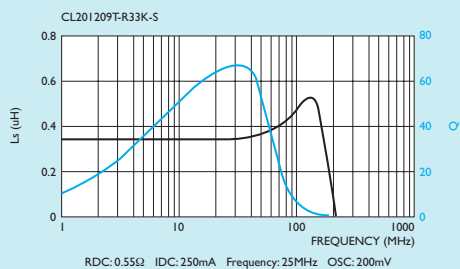
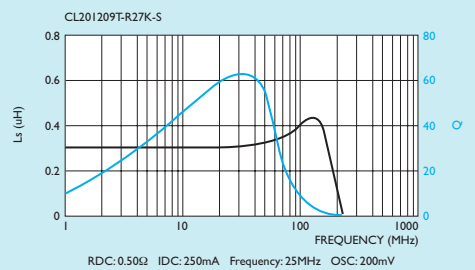
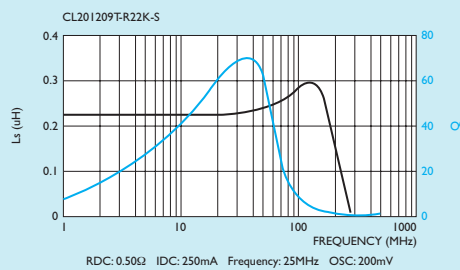
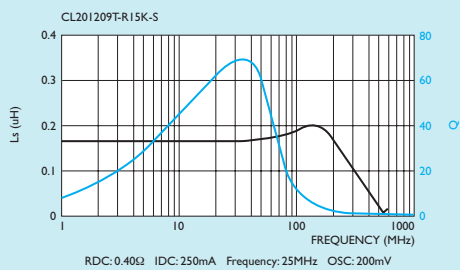
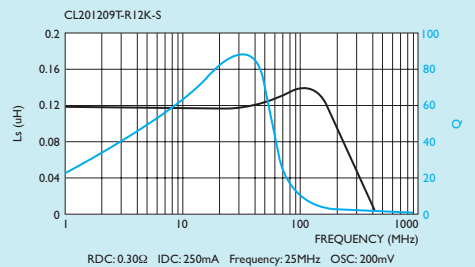
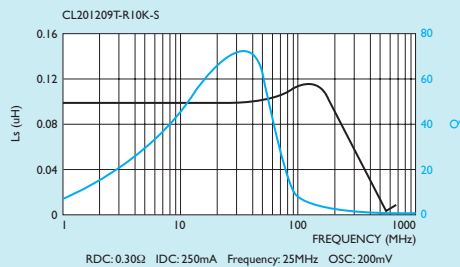
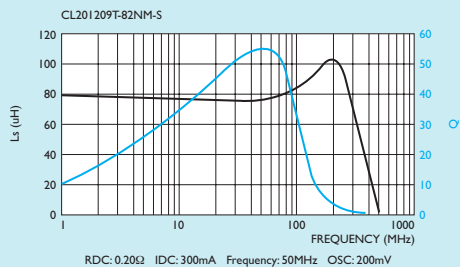
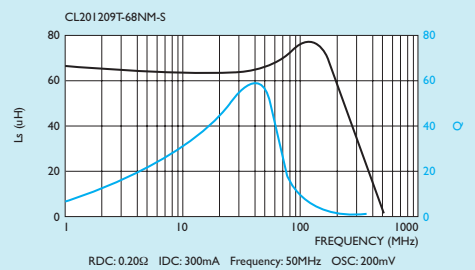
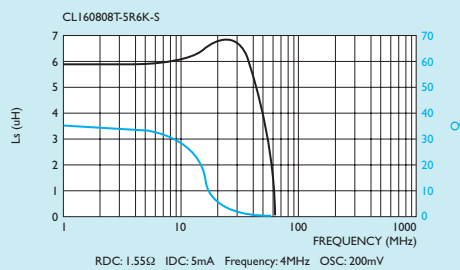
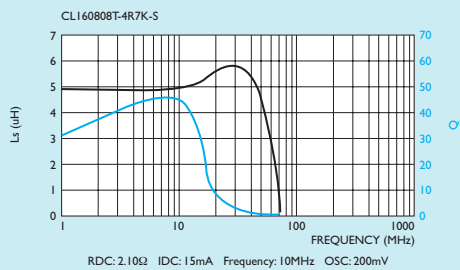
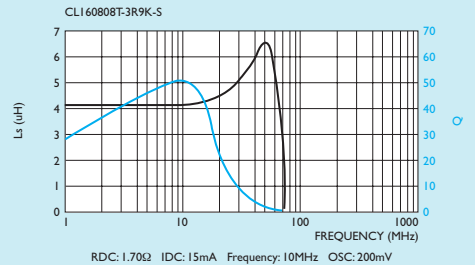
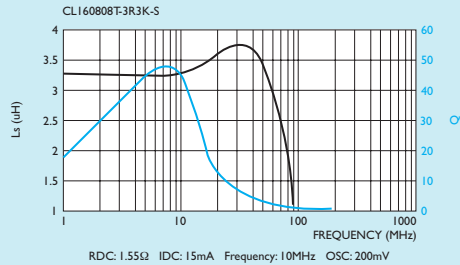
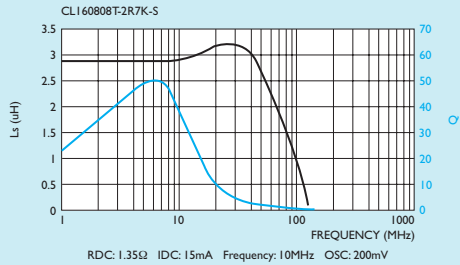
PACKAGING QUANTITY

TYPE	BULK	CHIP/REEL
CL160808	√	4000
CL160812	√	4000
CL201209	√	4000
CL201212	√	3000
CL321611	√	3000



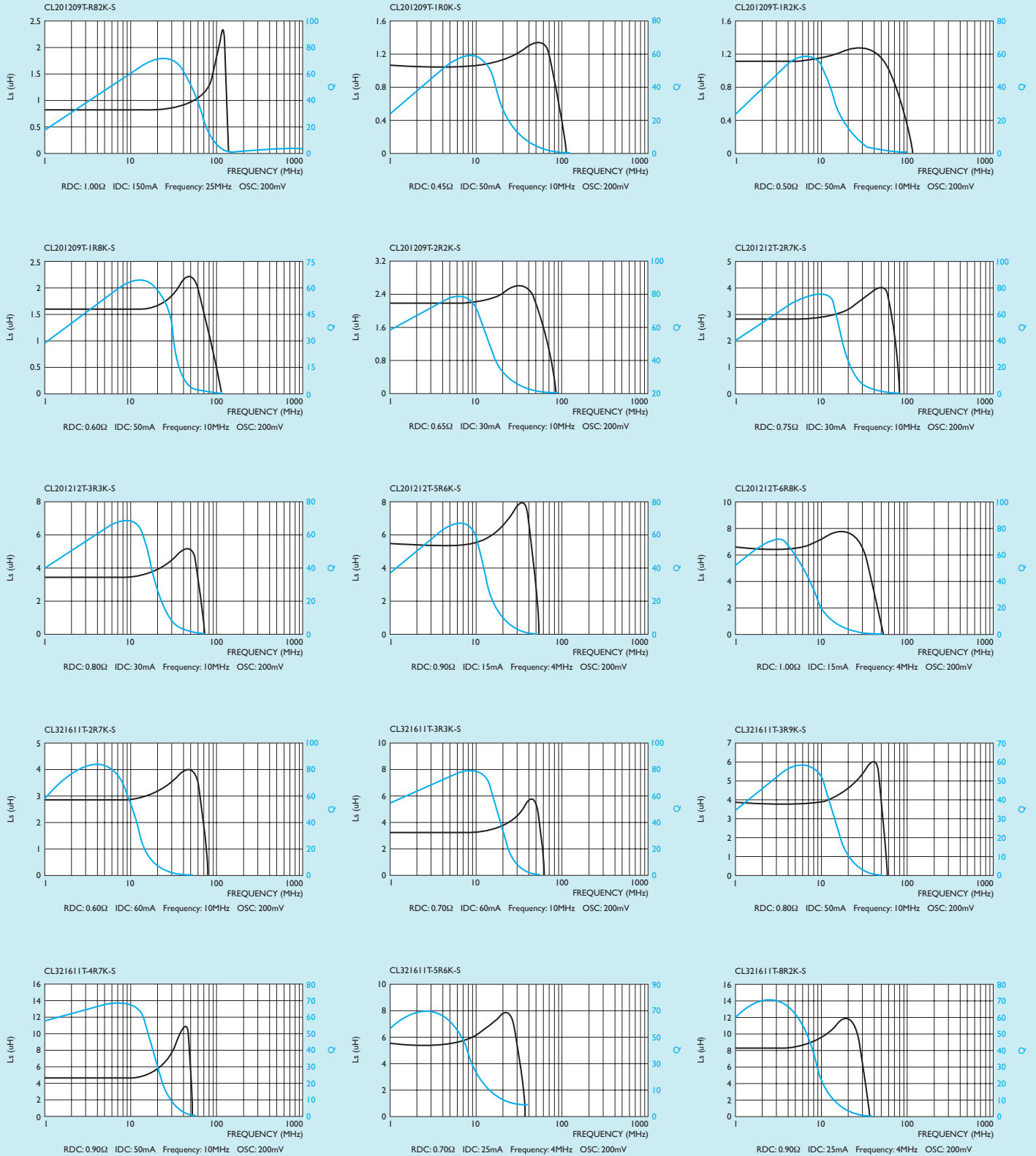
TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer



TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer





TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer

