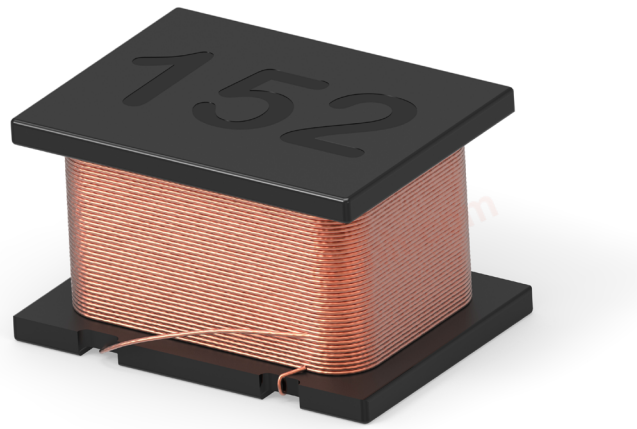
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MINIATURE SMD POWER INDUCTOR

TYPE 3627 SERIES

INTRODUCTION

TE Connectivity (TE)'s miniature SMD power inductors are designed with special ferrite cores for increased performance and reliability. They are offered in two variations viz. 3627 for low DC Resistance and 3627*C for low DC resistance & high current capability with high impedance characteristics, which make them a good choice for using as a choke coil in DC power supply circuits.



FEATURES

- Special ferrite core
- Low DC resistance
- High current capacity
- High impedance characteristics

APPLICATIONS

- High frequency communication products
- Personal computers
- Disc drives and computer peripherals
- DC power supply circuits

INDUCTANCE AND RATED CURRENT RANGES

Type	Inductance Range (μH)	Current Range (A)
3627 322515	1.00 ~ 100	1.00 ~ 0.1
3627 322520	1.00 ~ 560	0.445 ~ 0.04
3627 453226	1.00 ~ 2200	0.5 ~ 0.03
3627 322515C	0.47 ~ 120	3.4 ~ 0.17
3627 322520C	1.00 ~ 560	1.00 ~0.06
3627 453226C	1.00 ~ 1000	1.08 ~ 0.05
3627 575047C	0.12 ~ 10000	6.00 ~ 0.05

Electrical specifications at 25°C

CHARACTERISTICS FOR 3627 322515C

Rated DC Current (I sat)	The current when the inductance becomes 30% typical of its initial value (Ta=25°C)
Temperature Rise Current (I rms)	The actual current when the temperature of coil becomes Δ T40°C. (Ta=25°C)
Operating temperature range	-40~125°C

CHARACTERISTICS FOR OTHER MODELS

Rated DC Current	The current when the inductance becomes 10% lower than its initial value or the current when the temperature of coil increases Δ T20°C. The smaller one is defined as Rated DC Current (Ta=25°C).
Operating temperature range	-40~125°C

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ELECTRICAL CHARACTERISTICS: 3627 322515

Code	L (µH)	Tolerance	Test Condition	DCR (Ω) Max.	IDC (A) Max	SRF (MHz) Min.
1R0	1.0	N	1MHz, 0.1V	0.078	1.000	100
1R5	1.5	N	1MHz, 0.1V	0.068	1.200	100
2R2	2.2	M	1MHz, 0.1V	0.126	0.790	64
3R3	3.3	M	1MHz, 0.1V	0.180	0.700	50
4R7	4.7	M	1MHz, 0.1V	0.195	0.650	43
100	10	K	1MHz, 0.1V	0.420	0.450	26
150	15	K	1MHz, 0.1V	0.750	0.300	22
220	22	K	1MHz, 0.1V	1.000	0.250	19
330	33	K	1MHz, 0.1V	1.400	0.200	17
470	47	K	1MHz, 0.1V	2.200	0.170	13
680	68	K	1MHz, 0.1V	3.200	0.130	9
101	100	K	1MHz, 0.1V	4.500	0.100	8

ELECTRICAL CHARACTERISTICS: 3627 322520

Code	L (µH)	Tolerance	Test Condition	DCR (Ω) Max.	IDC (A) Max
1R0	1.0	M	1MHz, 0.1V	0.50	0.445
1R2	1.2	M	1MHz, 0.1V	0.60	0.425
1R5	1.5	K	1MHz, 0.1V	0.60	0.400
1R8	1.8	K	1MHz, 0.1V	0.70	0.390
2R2	2.2	K	1MHz, 0.1V	0.80	0.370
2R7	2.7	K	1MHz, 0.1V	0.90	0.320
3R3	3.3	K	1MHz, 0.1V	1.00	0.300
3R9	3.9	K	1MHz, 0.1V	1.10	0.290
4R7	4.7	K	1MHz, 0.1V	1.20	0.270
5R6	5.6	K	1MHz, 0.1V	1.30	0.250
6R8	6.8	K	1MHz, 0.1V	1.50	0.240
8R2	8.2	K	1MHz, 0.1V	1.60	0.225
100	10	J	1MHz, 0.1V	1.80	0.190
120	12	J	1MHz, 0.1V	2.00	0.180
150	15	J	1MHz, 0.1V	2.20	0.170
180	18	J	1MHz, 0.1V	2.50	0.165
220	22	J	1MHz, 0.1V	2.80	0.150
270	27	J	1MHz, 0.1V	3.10	0.125
330	33	J	1MHz, 0.1V	3.50	0.115
390	39	J	1MHz, 0.1V	3.90	0.110
470	47	J	1MHz, 0.1V	4.30	0.100
560	56	J	1MHz, 0.1V	4.90	0.085
680	68	J	1MHz, 0.1V	5.50	0.080
820	82	J	1MHz, 0.1V	6.20	0.070

MINIATURE SMD POWER INDUCTOR

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ELECTRICAL CHARACTERISTICS: 3627 322520

Code	L (µH)	Tolerance	Test Condition	DCR (Ω) Max.	IDC (A) Max
101	100	J	1MHz, 0.1V	7.00	0.080
121	120	J	1MHz, 0.1V	8.00	0.075
151	150	J	1MHz, 0.1V	9.30	0.070
181	180	J	1MHz, 0.1V	10.20	0.065
221	220	J	1MHz, 0.1V	11.80	0.065
271	270	J	1MHz, 0.1V	12.50	0.065
331	330	J	1MHz, 0.1V	15.00	0.065
391	390	J	1MHz, 0.1V	22.00	0.050
471	470	J	1KHz, 0.1V	25.00	0.045
561	560	J	1KHz, 0.1V	28.00	0.040

ELECTRICAL CHARACTERISTICS: 3627 453226

Code	L (µH)	Tolerance	Test Condition	DCR (Ω) Max.	IDC (A) Max
1R0	1.0	M	1MHz, 0.1V	0.20	0.500
1R2	1.2	M	1MHz, 0.1V	0.20	0.500
1R5	1.5	M	1MHz, 0.1V	0.30	0.500
1R8	1.8	M	1MHz, 0.1V	0.30	0.500
2R2	2.2	M	1MHz, 0.1V	0.30	0.500
2R7	2.7	M	1MHz, 0.1V	0.32	0.500
3R3	3.3	M	1MHz, 0.1V	0.35	0.500
3R9	3.9	M	1MHz, 0.1V	0.38	0.500
4R7	4.7	K	1MHz, 0.1V	0.40	0.500
5R6	5.6	K	1MHz, 0.1V	0.47	0.500
5R6-1	5.6	M	1MHz, 0.25V	0.18	1.180
6R8	6.8	K	1MHz, 0.1V	0.50	0.450
8R2	8.2	K	1MHz, 0.1V	0.56	0.450
100	10	J	1MHz, 0.1V	0.56	0.400
120	12	J	1MHz, 0.1V	0.62	0.380
150	15	J	1MHz, 0.1V	0.73	0.360
180	18	J	1MHz, 0.1V	0.82	0.340
220	22	J	1MHz, 0.1V	0.94	0.320
270	27	J	1MHz, 0.1V	1.10	0.300
330	33	J	1MHz, 0.1V	1.20	0.270
390	39	J	1MHz, 0.1V	1.40	0.240
470	47	J	1MHz, 0.1V	1.50	0.220
560	56	J	1MHz, 0.1V	1.70	0.200
680	68	J	1MHz, 0.1V	1.90	0.180
820	82	J	1MHz, 0.1V	2.20	0.170
101	100	J	1MHz, 0.1V	2.50	0.160

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ELECTRICAL CHARACTERISTICS: 3627 453226

Code	L (µH)	Tolerance	Test Condition	DCR (Ω) Max.	IDC (A) Max
121	120	J	1MHz, 0.1V	3.00	0.150
151	150	J	1MHz, 0.1V	3.70	0.130
181	180	J	1MHz, 0.1V	4.50	0.120
221	220	J	1MHz, 0.1V	5.40	0.110
271	270	J	1MHz, 0.1V	6.80	0.100
331	330	J	1MHz, 0.1V	8.20	0.095
391	390	J	1MHz, 0.1V	9.70	0.090
471	470	J	1KHz, 0.1V	11.80	0.080
561	560	J	1KHz, 0.1V	14.50	0.070
681	680	J	1KHz, 0.1V	17.00	0.065
821	820	J	1KHz, 0.1V	20.50	0.060
102	1000	J	1KHz, 0.1V	25.00	0.050
122	1200	J	1KHz, 0.1V	30.00	0.045
152	1500	J	1KHz, 0.1V	37.00	0.040
152-2	1500	K	1KHz, 0.1V	37.00	0.055
182	1800	J	1KHz, 0.1V	45.00	0.035
222	2200	J	1KHz, 0.1V	50.00	0.030
222-1*	2200	K	1KHz, 0.1V	47.00	0.078*

*Note: For 222-1 IDC is the current at which inductance becomes 30% lower than initial value

ELECTRICAL CHARACTERISTICS: 3627 322515C

Code	L (µH)	Tolerance	Test Condition	DCR (Ω) ±20	Isat (A) Max.	Irms (A) Max.	SRF (MHz) Min.
R47	0.47	N	1MHz, 0.1V	0.030	3.40	2.55	100
1R0	1.0	N	1MHz, 0.1V	0.045	2.30	2.05	100
1R5	1.5	N	1MHz, 0.1V	0.057	1.75	1.75	70
2R2	2.2	N	1MHz, 0.1V	0.076	1.55	1.60	70
3R3	3.3	N	1MHz, 0.1V	0.120	1.25	1.20	50
4R7	4.7	N	1MHz, 0.1V	0.180	1.00	1.00	40
6R8	6.8	N	1MHz, 0.1V	0.240	0.85	0.85	40
100	10	M	1MHz, 0.1V	0.380	0.75	0.70	30
150	15	M	1MHz, 0.1V	0.570	0.60	0.52	20
220	22	M	1MHz, 0.1V	0.810	0.50	0.45	20
330	33	M	1MHz, 0.1V	1.150	0.38	0.39	13
470	47	M	1MHz, 0.1V	1.780	0.33	0.31	11
680	68	M	1MHz, 0.1V	2.280	0.28	0.275	11
101	100	M	1MHz, 0.1V	2.700	0.18	0.250	8
121	120	M	1MHz, 0.1V	4.380	0.17	0.200	8

MINIATURE SMD POWER INDUCTOR

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ELECTRICAL CHARACTERISTICS: 3627 322520C

Code	L (μH)	Tolerance	Test Condition	DCR (Ω) Max.	IDC (A) Max.
1R0	1.0	M	1MHz, 0.1V	0.078	1.000
2R2	2.2	M	1MHz, 0.1V	0.126	0.790
3R3	3.3	M	1MHz, 0.1V	0.165	0.500
4R7	4.7	M	1MHz, 0.1V	0.195	0.450
4R7-2	4.7	M	100KHz, 0.25V	0.195	0.650
6R8	6.8	M	1MHz, 0.1V	0.330	0.450
100	10	M	1MHz, 0.1V	0.572	0.300
220	22	K	1MHz, 0.1V	0.923	0.250
470	47	K	1MHz, 0.1V	1.690	0.170
101	100	J	1MHz, 0.1V	4.550	0.100
121	120	K	1MHz, 0.1V	7.000	0.180
151	150	J	1MHz, 0.1V	9.100	0.080
221	220	J	1MHz, 0.1V	10.92	0.070
331	330	J	1MHz, 0.1V	13.00	0.060
391	390	J	1MHz, 0.1V	22.10	0.060
471	470	J	1MHz, 0.1V	24.70	0.060
561	560	J	1MHz, 0.1V	28.60	0.060

ELECTRICAL CHARACTERISTICS: 3627 453226C

Code	L (μH)	Tolerance	Test Condition	DCR (Ω) Max.	IDC (A) Max.
1R0	1.0	M	1MHz, 0.1V	0.08	1.080
1R5	1.5	M	1MHz, 0.1V	0.09	1.000
2R2	2.2	M	1MHz, 0.1V	0.11	0.900
3R3	3.3	M	1MHz, 0.1V	0.13	0.800
4R7	4.7	K	1MHz, 0.1V	0.15	0.750
6R8	6.8	K	1MHz, 0.1V	0.20	0.720
100	10	J	1MHz, 0.1V	0.24	0.650
150	15	J	1MHz, 0.1V	0.32	0.570
220	22	J	1MHz, 0.1V	0.60	0.420
330	33	J	1MHz, 0.1V	1.00	0.310
470	47	J	1MHz, 0.1V	1.10	0.280
680	68	J	1MHz, 0.1V	1.70	0.220
101	100	J	1MHz, 0.1V	2.20	0.190
151	150	J	1MHz, 0.1V	3.50	0.130
221	220	J	1MHz, 0.1V	4.00	0.110
331	330	J	1MHz, 0.1V	6.80	0.100
471	470	J	1KHz, 0.1V	8.50	0.090
102	1000	K	1KHz, 0.1V	25.00	0.050

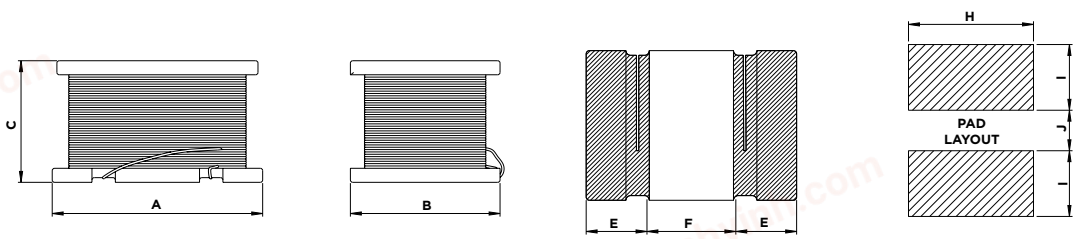
MINIATURE SMD POWER INDUCTOR

Type 3627 Series

ELECTRICAL CHARACTERISTICS: 3627 575047C

Code	L (µH)	Tolerance	Test Condition	DCR (Ω) Max.	IDC (A) Max.
R12	0.12	M	1MHz, 0.1V	0.0098	6.000
R27	0.27	M	1MHz, 0.1V	0.0140	5.300
R47	0.47	M	1MHz, 0.1V	0.0182	4.800
1R0	1.0	M	1MHz, 0.1V	0.0270	4.000
1R5	1.5	M	1MHz, 0.1V	0.0310	3.700
2R2	2.2	M	1MHz, 0.1V	0.0410	3.200
3R3	3.3	M	1MHz, 0.1V	0.0500	2.900
4R7	4.7	M	1MHz, 0.1V	0.0574	2.700
6R8	6.8	M	1MHz, 0.1V	0.1040	2.000
100	10	K	1MHz, 0.1V	0.1300	1.700
100-1	10	K	1MHz, 0.25V	0.1300	2.000
150	15	K	1MHz, 0.1V	0.210	1.400
220	22	K	1MHz, 0.1V	0.266	1.200
270	27	K	1MHz, 0.1V	0.300	1.000
330	33	K	1MHz, 0.1V	0.448	0.900
470	47	K	1MHz, 0.1V	0.560	0.800
680	68	K	1MHz, 0.1V	0.938	0.640
101	100	K	100KHz, 0.1V	1.204	0.560
151	150	K	100KHz, 0.1V	2.660	0.420
221	220	K	100KHz, 0.1V	3.360	0.320
331	330	K	100KHz, 0.1V	6.160	0.270
471	470	K	100KHz, 0.1V	7.560	0.240
681	680	K	100KHz, 0.1V	11.34	0.190
102	1000	K	10KHz, 0.1V	14.42	0.150
222	2200	K	10KHz, 0.1V	30.10	0.100
472	4700	K	10KHz, 0.1V	61.04	0.070
472-1	4700	M	100KHz, 0.25V	61.00	0.090
103	10000	K	10KHz, 0.1V	140.0	0.050

DIMENSIONS



Type	A (mm)	B (mm)	C (mm)	E (mm)	F (mm)	H (mm)	I (mm)	J (mm)
322515(C)	3.2±0.3	2.5±0.2	1.55±0.3	1.05±0.3	1.05±0.3	2.0	1.5	1.0
322520(C)	3.2±0.3	2.5±0.2	2.0±0.3	0.7min.	0.7min.	2.0	1.5	1.0
453226(C)	4.5±0.3	3.2±0.2	2.6±0.4	1.0min.	1.0min.	3.0	2.0	1.2
575047C	5.7±0.3	5.0±0.3	4.7±0.3	1.3min.	1.7min.	5.0	2.0	2.0

MINIATURE SMD POWER INDUCTOR

Type 3627 Series

ENVIRONMENTAL SPECIFICATIONS

General

Item	Specification
Shelf storage conditions	Temperature range: 15 ~ 28°C Humidity: <80% relative humidity Recommended product should be used within one year from the time of delivery.

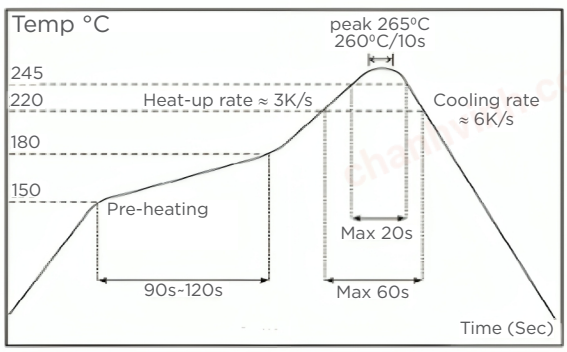
Environmental

Test item	Specification	Test conditions / methods	
High temperature Storage test	No case deformation or change in appearance. ΔL / L ≤ 10%	Temperature: 85±2°C, Time: 48±2 hours Tested after 1 hour at room temperature	
Low temperature Storage test		Temperature -25±2°C, Time: 48±2 hours, Tested after 1hour at room temperature.	
Humidity test		Temperature: 40±2°C, Relative humidity: 90~95% Time: 96±2 hours Tested after 1hour at room temperature.	
Thermal shock test		Cycle	30m @ -25°C 10m @ 25°C 30m @ 85°C
		Number of cycles 5 Tested after 1 hour at room temperature.	

Mechanical

Test item	Specification	Test conditions / methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
Resistance to Soldering Heat	No case deformation or change in appearance.	Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature of 130~150°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance. ΔL / L ≤ 10%	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance		Drop down with 981m/s² (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations.

REFLOW SOLDER PROFILE

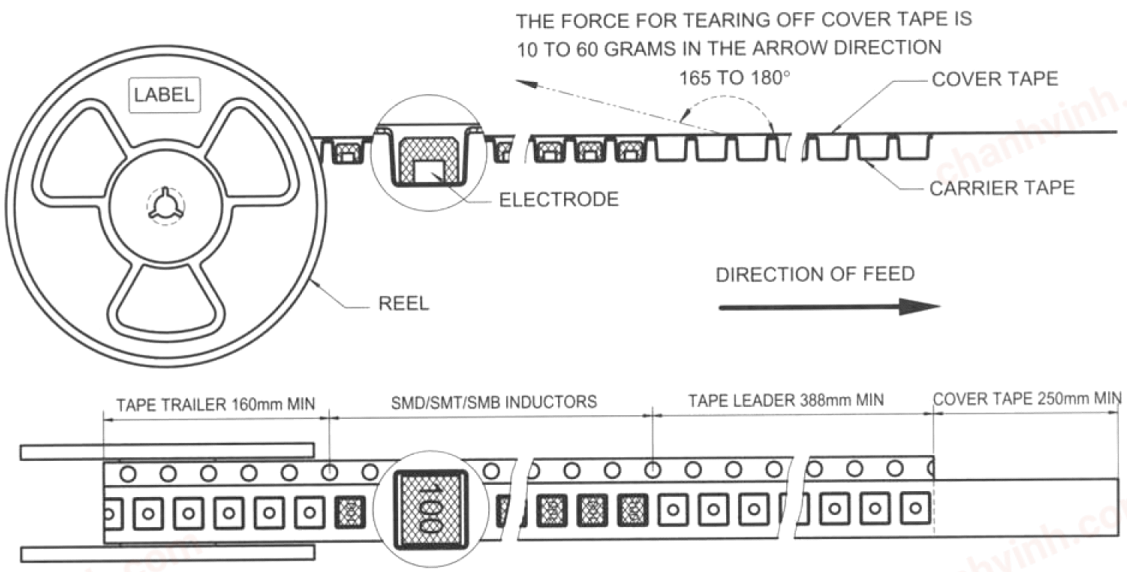


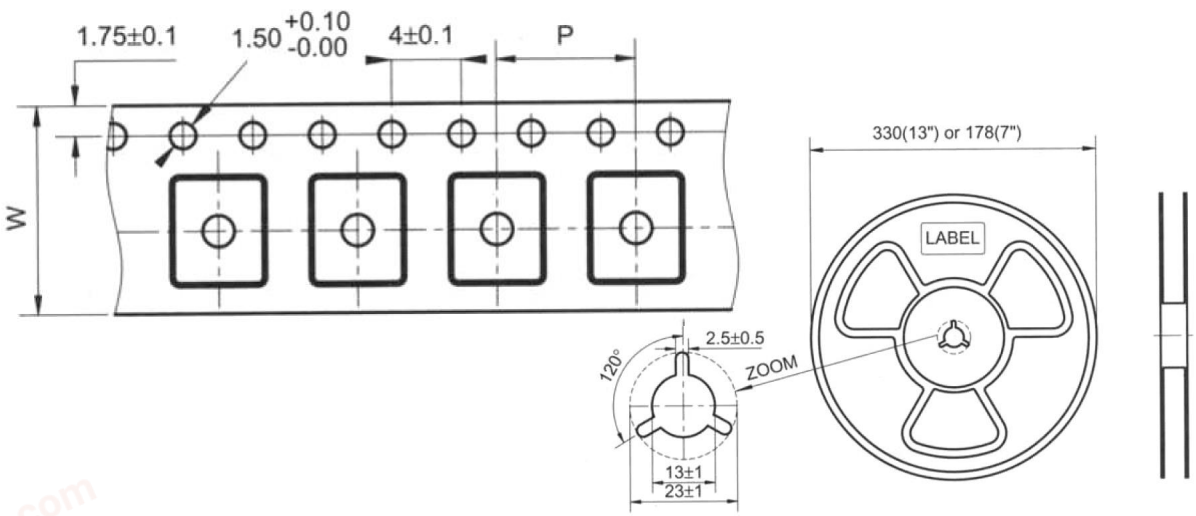
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MINIATURE SMD POWER INDUCTOR

Type 3627 Series

TAPE AND REEL SPECIFICATIONS

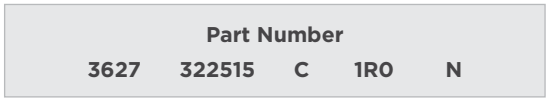




Type	Tape size		Parts per reel	
	W (mm)	P (mm)	7”	13”
322515	8	4	2000	-
322520	12	8	1000	-
453226	12	8	500	-
575047	16	12	-	1000

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ORDERING INFORMATION



Common Part

3627

Size

322515	3.2 x 2.5 x 1.55mm
322520	3.2 x 2.5 x 2.0mm
453226	4.5 x 3.2 x 2.6mm
575047	5.7 x 5.0 x 4.7mm

Rated Power

C	Choke use
Blank	General use

Inductance Value

1R0	1.0µH
100	10µH
331	330µH
222	220µH

Resistance Tolerance

J	5%
K	10%
M	20%
N	30%

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