

SMCM Series Specification

9 Reliability Of Ferrite Wire Wound Chip Inductor/FERRITE SERIES

1-1. Mechanical Performance

No	Item	Specification	Test Method
1-1-1	Vibration	Appearance: No damage Inductance: within $\pm 10\%$ of initial value Q change: within $\pm 30\%$ of initial value	Test device shall be soldered on the substrate Oscillation Frequency: 10 to 55 to 10Hz for 1min Amplitude: 1.5mm Time: 2hrs for each axis (X, Y & Z), total 6hrs
1-1-2	Solder ability	The electrodes shall be at least 90% covered with new solder coating	Pre-heating: 150°C, 1min Solder Composition: Sn/Ag3.0/Cu0.5 Solder Temperature: 245\pm5°C Immersion Time: 4 \pm 1sec

1-2. Environmental Performance

No	Item	Specification	Test Method															
1-2-1	Temperature Cycle	Appearance: No damage Inductance: within $\pm 10\%$ of initial value Q change: within $\pm 30\%$ of initial value	<table border="1"> <thead> <tr> <th>Step</th> <th>Temperature (°C)</th> <th>Time (min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25\pm3</td> <td>30</td> </tr> <tr> <td>2</td> <td>25\pm2</td> <td>3</td> </tr> <tr> <td>3</td> <td>85\pm3</td> <td>30</td> </tr> <tr> <td>4</td> <td>25\pm2</td> <td>3</td> </tr> </tbody> </table> <p>Total: 100cycles Measured after exposure in the room condition for 24hrs</p>	Step	Temperature (°C)	Time (min)	1	-25 \pm 3	30	2	25 \pm 2	3	3	85 \pm 3	30	4	25 \pm 2	3
Step	Temperature (°C)	Time (min)																
1	-25 \pm 3	30																
2	25 \pm 2	3																
3	85 \pm 3	30																
4	25 \pm 2	3																
1-2-2	Humidity Resistance		Temperature: 40 \pm 2°C Relative Humidity: 90 ~ 95% Time: 1000hrs Measured after exposure in the room condition for 24hrs															
1-2-3	High Temperature Resistance		Temperature: 85 \pm 3°C Relative Humidity: 20% Applied Current: Rated Current Time: 1000hrs Measured after exposure in the room condition for 24hrs															
1-2-4	Low Temperature Resistance		Temperature: -25 \pm 3°C Relative Humidity: 0% Time: 1000hrs Measured after exposure in the room condition for 24hrs															



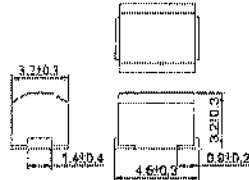
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WOUND CHIP INDUCTORS

SMCM TYPE

Shape and Dimension



Electrical Characteristic

Part Number	L μ (μ H)	Tolerance (\pm %)	Q Min	Test Freq. (MHz)	SRF (MHz) Min	RDC (Ω) Max	IDC (mA)
SMCM453232-R10M	0.10	20%	28	25.2	700	0.44	450
SMCM453232-R12M	0.12	20%	30	25.2	500	0.22	450
SMCM453232-R15M	0.15	20%	30	25.2	450	0.25	450
SMCM453232-R18M	0.18	20%	30	25.2	400	0.28	450
SMCM453232-R22M	0.22	20%	30	25.2	350	0.32	450
SMCM453232-R27M	0.27	20%	30	25.2	320	0.36	450
SMCM453232-R33M	0.33	20%	30	25.2	300	0.40	450
SMCM453232-R39M	0.39	20%	30	25.2	250	0.45	450
SMCM453232-R47M	0.47	20%	30	25.2	220	0.50	450
SMCM453232-R56M	0.56	20%	30	25.2	180	0.55	450
SMCM453232-R68M	0.68	20%	30	25.2	160	0.60	450
SMCM453232-R82M	0.82	20%	30	25.2	140	0.67	450
SMCM453232-1R0K	1.00	10%	50	7.96	100	0.50	450
SMCM453232-1R2K	1.20	10%	50	7.96	80	0.55	430
SMCM453232-1R5K	1.50	10%	50	7.96	70	0.60	410
SMCM453232-1R8K	1.80	10%	50	7.96	60	0.65	390
SMCM453232-2R2K	2.20	10%	50	7.96	55	0.70	380
SMCM453232-2R7K	2.70	10%	50	7.96	50	0.75	370
SMCM453232-3R3K	3.30	10%	50	7.96	45	0.80	355
SMCM453232-3R9K	3.90	10%	50	7.96	40	0.90	330
SMCM453232-4R7K	4.70	10%	50	7.96	35	1.00	315
SMCM453232-5R6K	5.60	10%	50	7.96	33	1.10	300
SMCM453232-6R8K	6.80	10%	50	7.96	27	1.20	285
SMCM453232-8R2K	8.20	10%	50	7.96	25	1.40	270
SMCM453232-100K	10	10%	50	2.52	20	1.60	250
SMCM453232-120K	12	10%	50	2.52	18	2.00	225
SMCM453232-150K	15	10%	50	2.52	17	2.50	200
SMCM453232-180K	18	10%	50	2.52	15	2.80	190
SMCM453232-220K	22	10%	50	2.52	13	3.20	180
SMCM453232-270K	27	10%	50	2.52	12	3.60	170
SMCM453232-330K	33	10%	50	2.52	11	4.00	160
SMCM453232-390K	39	10%	50	2.52	10	4.50	150
SMCM453232-470K	47	10%	50	2.52	10	5.00	140
SMCM453232-560K	56	10%	50	2.52	9	5.50	135
SMCM453232-680K	68	10%	50	2.52	9	6.00	130
SMCM453232-820K	82	10%	50	2.52	8	7.00	120
SMCM453232-101K	100	10%	40	0.796	8	8.00	110
SMCM453232-121K	120	10%	40	0.796	6	8.00	110
SMCM453232-151K	150	10%	40	0.796	5	9.00	105
SMCM453232-181K	180	10%	40	0.796	5	9.50	102
SMCM453232-221K	220	10%	40	0.796	4	10.00	100
SMCM453232-271K	270	10%	40	0.796	4	12.00	92
SMCM453232-331K	330	10%	40	0.796	3.5	14.00	85
SMCM453232-391K	390	10%	40	0.796	3	18.00	80
SMCM453232-471K	470	10%	40	0.796	3	26.00	62
SMCM453232-561K	560	10%	30	0.796	3	30.00	50
SMCM453232-681K	680	10%	30	0.796	3	30.00	50
SMCM453232-821K	820	10%	30	0.796	2.5	35.00	30
SMCM453232-102K	1000	10%	20	0.252	2.5	40.00	30

*Inductance tolerance J (\pm 20%), K (\pm 10%)
 Operating temperature: -25°C to +85°C

SMGM Series Specification

