

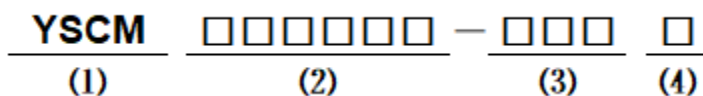
■ Features

- Ferrite drum core construction.
- Heat-resistant molded resin housing.
- Excellent mechanical strength.
- Wide range of L values from 0.1 to 1,000 μH .
- Operating temperature: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (Including self-temperature rise) .

■ Applications

- Wireless communication.
- Portable Devices.
- Personal computers, hard disk drives, and other electronic equip-ment.

■ Product Identification



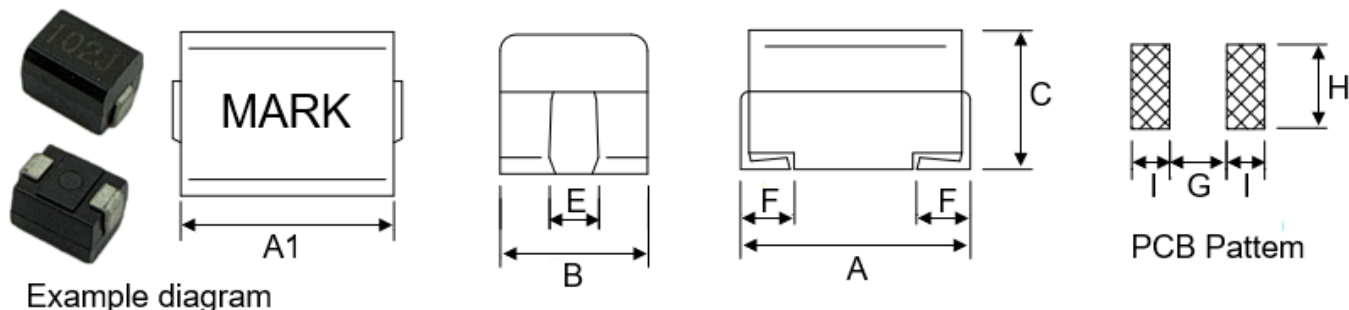
(1) : Type

(2) : Dimensions

(3) : Inductance value

(4) : Inductance Tolerance: M=±20%, K=±10%, J=±5%

■ Shapes and Dimensions (Unit: mm)



TYPE	A	A1	B	C	E	F	G Typ.	H Typ.	I Typ.
YSCM453232	4.5±0.3	4.2±0.2	3.2±0.2	3.2±0.2	1.0±0.2	1.0±0.3	2.2	1.6	1.5

■ YSCM453232 Series

Part Number	Inductance (uH)	Q Min.	Test Freq (MHz)	SRF Typ. (MHz)	RDC Max. (Ω)	IDC Max. (mA)
YSCM453232-R10K	0.10±10%	35	25.2	780	0.18	800
YSCM453232-R12K	0.12±10%	35	25.2	735	0.20	770
YSCM453232-R15K	0.15±10%	35	25.2	615	0.22	730
YSCM453232-R18K	0.18±10%	35	25.2	570	0.24	700
YSCM453232-R22K	0.22±10%	40	25.2	505	0.25	665
YSCM453232-R27K	0.27±10%	40	25.2	450	0.26	635
YSCM453232-R33K	0.33±10%	40	25.2	425	0.28	605
YSCM453232-R39K	0.39±10%	40	25.2	390	0.30	575
YSCM453232-R47K	0.47±10%	40	25.2	350	0.32	545
YSCM453232-R56K	0.56±10%	40	25.2	325	0.36	520
YSCM453232-R68K	0.68±10%	40	25.2	300	0.40	500
YSCM453232-R82K	0.82±10%	40	25.2	275	0.45	475
YSCM453232-1R0J	1.0±5%	50	7.96	250	0.50	450
YSCM453232-1R2J	1.2±5%	50	7.96	240	0.55	430
YSCM453232-1R5J	1.5±5%	50	7.96	210	0.60	410
YSCM453232-1R8J	1.8±5%	50	7.96	190	0.65	390
YSCM453232-2R2J	2.2±5%	50	7.96	160	0.70	380
YSCM453232-2R7J	2.7±5%	50	7.96	150	0.75	370
YSCM453232-3R3J	3.3±5%	50	7.96	110	0.80	355
YSCM453232-3R9J	3.9±5%	50	7.96	100	0.90	330
YSCM453232-4R7J	4.7±5%	50	7.96	80	1.00	315
YSCM453232-5R6J	5.6±5%	50	7.96	50	1.10	300
YSCM453232-6R8J	6.8±5%	50	7.96	35	1.20	285
YSCM453232-8R2J	8.2±5%	50	7.96	28	1.40	270
YSCM453232-100J	10±5%	50	2.52	22	1.60	250
YSCM453232-120J	12±5%	50	2.52	20	2.00	225

■ YSCM453232 Series

Part Number	Inductance (uH)	Q Min.	Test Freq (MHz)	SRF Typ. (MHz)	RDC Max. (Ω)	IDC Max. (mA)
YSCM453232-150J	15±5%	50	2.52	18	2.50	200
YSCM453232-180J	18±5%	50	2.52	16	2.80	190
YSCM453232-220J	22±5%	50	2.52	14	3.20	180
YSCM453232-270J	27±5%	50	2.52	13	3.60	170
YSCM453232-330J	33±5%	50	2.52	12	4.00	160
YSCM453232-390J	39±5%	50	2.52	11	4.50	150
YSCM453232-470J	47±5%	50	2.52	10.5	5.00	140
YSCM453232-560J	56±5%	50	2.52	10	5.50	135
YSCM453232-680J	68±5%	50	2.52	9.5	6.00	130
YSCM453232-820J	82±5%	50	2.52	8.5	7.00	120
YSCM453232-101J	100±5%	40	0.796	8	8.00	110
YSCM453232-121J	120±5%	40	0.796	7	8.00	110
YSCM453232-151J	150±5%	40	0.796	6	9.00	105
YSCM453232-181J	180±5%	40	0.796	5.5	9.50	102
YSCM453232-221J	220±5%	40	0.796	5.0	10.0	100
YSCM453232-271J	270±5%	40	0.796	4.5	12.0	92
YSCM453232-331J	330±5%	40	0.796	4.0	14.0	85
YSCM453232-391J	390±5%	40	0.796	3.5	18.0	80
YSCM453232-471J	470±5%	40	0.796	3.5	26.0	62
YSCM453232-561J	560±5%	30	0.796	3.0	30.0	50
YSCM453232-681J	680±5%	30	0.796	3.0	30.0	50
YSCM453232-821J	820±5%	30	0.796	2.5	35.0	30
YSCM453232-102J	1000±5%	20	0.252	2.5	40.0	30

- ※ All test data is referenced to 25 °C ambient.
- ※ Rated current: Current cause inductance drop within 10%.
- ※ Moisture sensitivity Level 1.
- ※ Temp. rise: 20°C max.
- ※ Ambient temp. : 100°C max.
- ※ Storage temp. : -40°C ~ +125°C.

■ Reliability Test

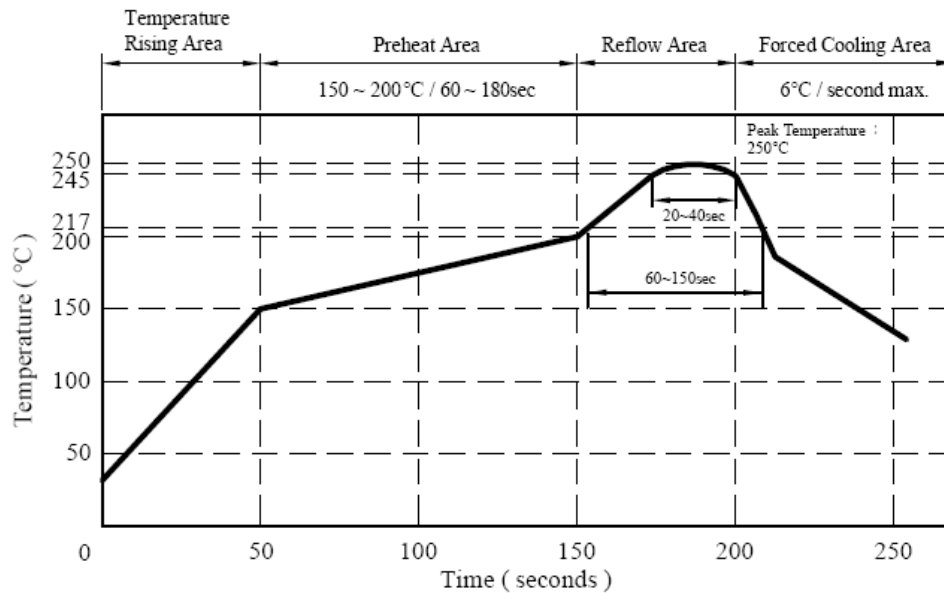
Item	Test Condition	Test Specification
High Temperature Exposure	1. Temperature: 125±2°C 2. Time: 96±2 hours.	1. No mechanical or electrical damage. 2. Inductance shall not change more than ±10%.
Temperature Cycling	1. Temperature: -40°C ~ +125°C 2. Number of cycle: 100 cycle 3. Dwell time: 30 minutes	1. No mechanical or electrical damage. 2. Inductance shall not change more than ±10%.
Biased Humidity Test	1. Temperature: 85±2 °C 2. Humidity: 85% RH. 3. Time: 96±2 Hours	1. No mechanical or electrical damage. 2. Inductance shall not change more than ±10%.
Operational Life	1. Temperature: 125°C (Temp. rise included) 2. Time: 96±2 hours. 3. Rated current	1. No mechanical or electrical damage. 2. Inductance shall not change more than ±10%.
External Visual	Inspect product constructions, marking and workmanship.	1. No pollution on the surface of products. 2. Clear marking. 3. No crack.
Physical Dimensions	Verify physical dimensions to the applicable product detail specification.	Per product specification standard
Resistance to solvents	Immerse into solvent for 3±0.5 minutes & brush 10 times for 3 cycles.	1. No body change in appearance. 2. No marking blurred. 3. Inductance shall not change more than ±10%.
Vibration Test	1. Frequency and Amplitude: 10-2000-10 Hz, 1.5 mm. 2. Direction: X, Y, Z 3. Test duration: 2 hours for each direction, 6 hours in total.	1. No mechanical or electrical damage. 2. Inductance shall not change more than ±10%.
Resistance To Soldering Heat Test	1. Highest temperature : 250±5°C . 2. Time (temp. ≥ 217°C): 60~ 150 Second. 3. IR reflow times : 3 times.	1. No mechanical or electrical damage. 2. Inductance shall not change more than ±10%.
Saturation Current	1. Applied rated current for 5 second. 2. Rated current	Inductance shall not drop more than 10% max.
Over load	1. Applied one and half rated current for a period of 5 minutes. 2. Rated current	No electrical or mechanical damage
Temperature Rise Current	1. Applied rated current for 10 minutes. 2. Temperature measure by digital surface thermometer. 3. Irms current	Surface temperature rise is less than 20°C max.

■ Reliability Test

Item	Test Condition	Test Specification
Solderability Test	1.Baking in pre-testing : $150\pm 5^{\circ}\text{C}$ / 16Hours ± 30 min. 2.Peak temperature : $240\pm 5^{\circ}\text{C}$ 3.Time (temp. $\geq 217^{\circ}\text{C}$): 60~ 150 second. 4.IR reflow times : 1 times.	More than 95% soldering coverage min on terminations.
Electrical Characteriazation	1.Operating temperature : $-40^{\circ}\text{C}\sim 125^{\circ}\text{C}$ 2.Room temperature : 25°C .	1.No mechanical or electrical damage. 2.Inductance shall not change more than $\pm 10\%$.
Withstanding Voltage Test	1.DC: 500 V (Terminal to Coating) 2.Time : 1minutes	1.During the test no breakdown. 2.No mechanical or electrical damage.
Insulation Resistance	DC voltage 100V applied between inductor terminal and coating for 1 minute.	1.IR = 1000M Ω Min. 2.No mechanical or electrical damage.
Drop	1.Products shall be mounted on SPEC. pcb and dropped down from a heigh of 1m 2.Drop total time : 6 time (Every side ofsample drop 2 time)	1. Adhesion on PCB shall be enough. 2. Product appearance shall not break. 3. No electrical damage.
Terminal Strength Test	1.Apply push force to samples mounted on PCB. 2.Force of 1.8 kg for 60 ± 1 seconds.	After test, inductors shall be no mechanical damage.

■ Recommended Soldering Technologies

Re-flowing Profile



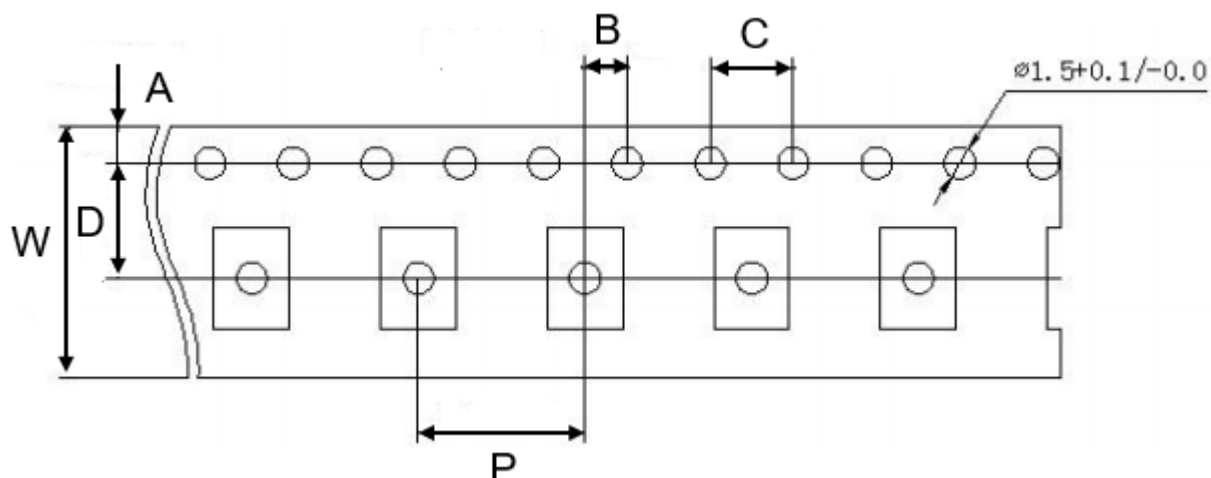
Peak temp: 250°C Max.

Max time above 245°C: 20~40 sec Max.

Max time above 217°C: 60~150 sec Max.

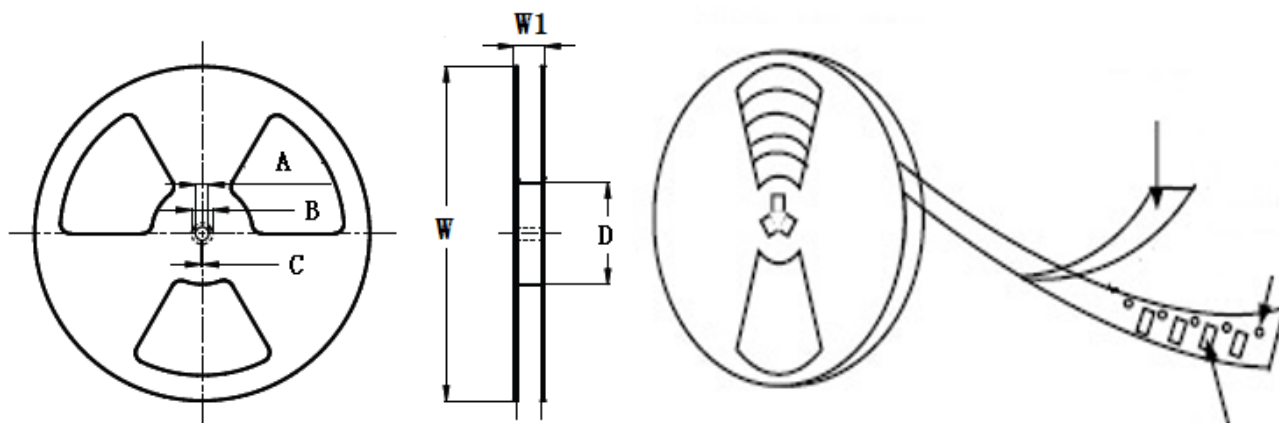
200°C ~ 250°C Average Ramp-up Rate: 3°C/second Max.

■ Taping Dimensions(Unit:mm)



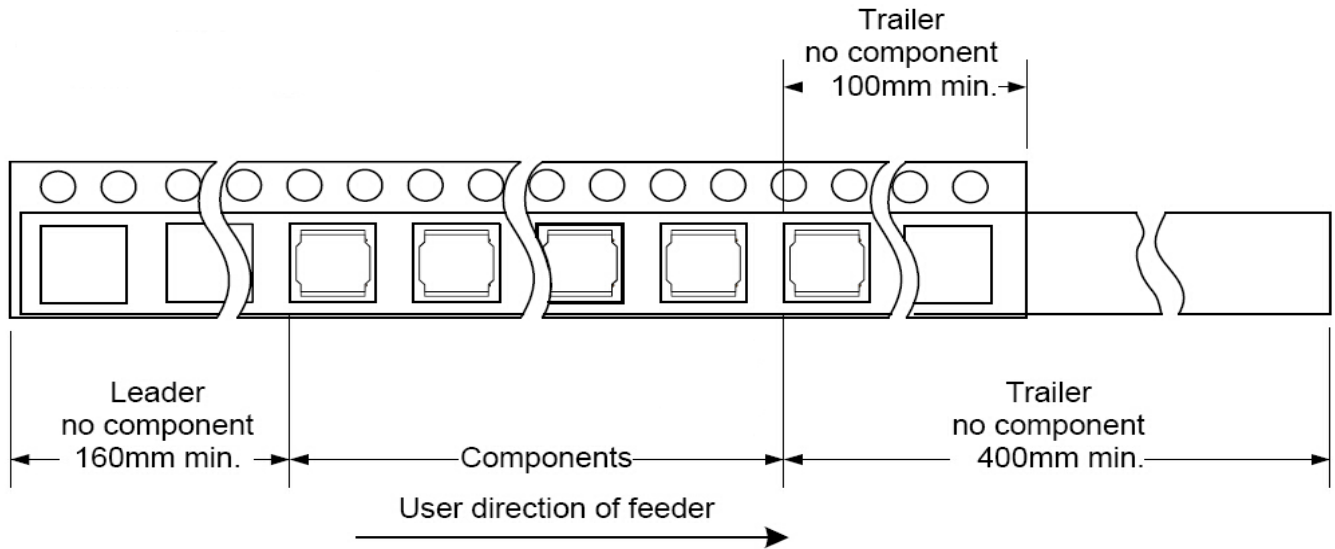
TYPE	W	A	B	C	D	P	MPQ
YSCM453232	12.0 ± 0.3	1.75 ± 0.1	2.0 ± 0.1	4.0 ± 0.1	5.5 ± 0.1	8.0 ± 0.1	500

■ Reel Dimensions(Unit:mm)

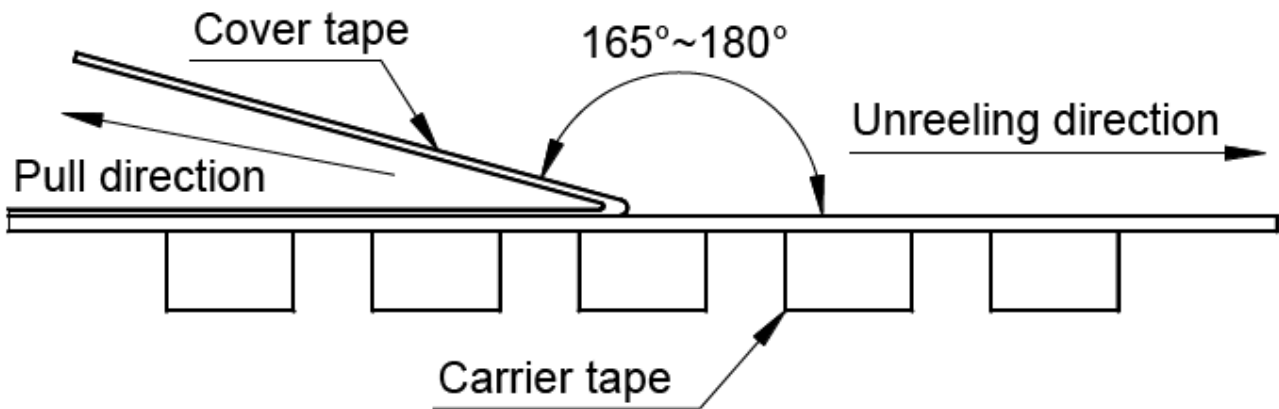


TYPE	W	W1	A	B	C	D
YSCM453232	178 ± 2.0	22.0 ± 2.0	13.0 ± 0.50	21.0 ± 0.80	2.0 ± 0.50	60.0 ± 2.0

■ Direction of rolling



■ Cover tape peel off condition



Cover tape peel force shall be 0.1N to 1.3N.

Reference peel speed 300±10mm/min.