



# EMI Suppression Product

## Multilayer Ferrite Bead

### TSCM Series (mid current)

#### FEATURES

- Internal printed layer enables a closed circuit acting as a magnetic shield for maximizing heat generation and minimizing crosstalk
- Closed magnetic circuit avoids crosstalk between adjacent circuitry
- Excellent solderability and heat resistance
- Monolithic structure design provides high reliability

#### APPLICATIONS

Noise countermeasure used in I/O lines for personal computers, digital TVs, video and AV products, printers, hard disk drives and other general consumer products. Most widely used on digital clock lines and general signal lines. Prevents signal interference between circuits in cellular phones (PHS, PDC, etc). For downsizing of board components, THFB1005 (0402) series size is an effective noise filter used in power supply lines due to the closed internal circuit acting as a magnetic shield.



#### SPECIFICATIONS

Operating temperature range -55°C ~ +125°C

Storage temperature range -40°C ~ +70°C

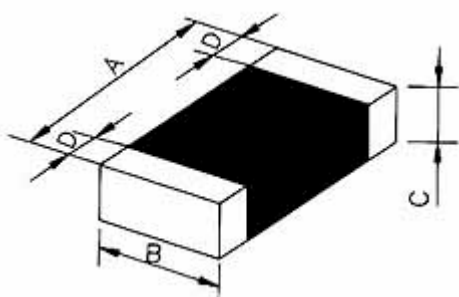
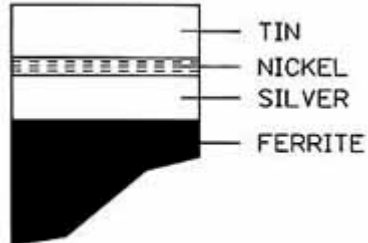
#### DIMENSIONS

Pkg. size	EIA Std	A	B	C	D
3216	1206	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
2012	0805	2.0 ± 0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
1608	0603	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.3 ± 0.2
1005	0402	1.0 ± 0.1	0.5 ± 0.1	0.5 ± 0.1	0.25 ± 0.1

Dimension in mm

#### PRECAUTIONS

After mounting components onto printed circuit board do not apply stress through board bending or mishandling. When hand soldering, apply solder iron to the printed circuit board only. Temperature of the iron tip should not exceed 260°C with soldering time < 3 seconds.

3D View		Terminal Electrode Construction			
					
Part Numbering Assignment					
<u>TSCM</u>	<u>3216</u>	<u>K</u>	<u>100</u>	<u>I</u>	<u>10</u>
A	B	C	D	E	F
SERIES	SIZE 3.2mm X 1.6mm (L x W)	MATERIAL TYPE CODE	IMPEDANCE CODE 300=30ohms 301=300ohms 202=2000ohms	PACKAGING STYLE T: TAPED AND REEL B: BULK	ALLOWABLE DC CURRENT 01=100mA 05=500mA 09=900mA

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Part Number	Impedance Z (Ohm) ±25%	Test Frequency (MHz)	Rated Current (mA) Max.	DC Resistance (Ohm) Max.	Dimensions (m/m)			
					A	B	C	D
EIA1206								
TSCM3216K-121T09	120	100	900	0.15	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
TSCM3216K-151T09	150	100	900	0.15	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
TSCM3216K-221T07	221	100	700	0.35	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
TSCM3216K-301T07	300	100	700	0.35	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
TSCM3216K-471T04	470	100	400	0.35	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
TSCM3216K-601T04	600	100	400	0.40	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
TSCM3216K-801T03	800	100	300	0.60	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
TSCM3216K-102T03	1000	100	300	0.60	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
TSCM3216V-152T03	1500	50	300	0.70	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
TSCM3216V-202T03	2000	30	300	0.70	3.2 ± 0.2	1.6 ± 0.2	1.1 ± 0.2	0.5 ± 0.3
EIA0805								
TSCM2012K-300T09	30	100	900	0.10	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012K-600T09	60	100	900	0.10	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012K-121T08	120	100	800	0.20	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012K-151T08	150	100	800	0.25	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012K-221T07	220	100	750	0.30	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012K-301T07	300	100	700	0.30	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012K-471T07	470	100	700	0.35	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012K-601T05	600	100	500	0.40	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012K-801T04	800	100	450	0.40	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012K-102T04	1000	100	400	0.45	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012H-152T03	1500	100	350	0.50	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012H-202T02	2000	100	250	0.60	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3
TSCM2012H-232T02	2300	100	200	0.80	2.0 ±0.2	1.25 ± 0.2	0.85 ± 0.2	0.5 ± 0.3

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					A	B	C	D
EIA0603								
TSCM1608K-300T07	30	100	700	0.20	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608K-600T07	60	100	700	0.20	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608K-121T06	120	100	600	0.25	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608K-151T06	150	100	600	0.25	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608K-221T05	220	100	550	0.30	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608K-301T05	300	100	500	0.35	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608K-471T03	470	100	350	0.45	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608K-601T03	600	100	350	0.50	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608K-801T02	800	100	250	0.65	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608K-102T02	1000	100	200	0.70	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608H-152T01	1500	100	100	1.00	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
TSCM1608H-202T01	2000	100	150	1.20	1.6 ± 0.15	0.8 ± 0.15	0.8 ± 0.15	0.5 ± 0.2
EIA0402								
TSCM1005K-300T03	30	100	300	0.20	1.0 ± 0.10	0.5 ± 0.10	0.5 ± 0.10	0.25 ± 0.1
TSCM1005K-600T03	60	100	300	0.25	1.0 ± 0.10	0.5 ± 0.10	0.5 ± 0.10	0.25 ± 0.1
TSCM1005K-121T01	120	100	100	0.30	1.0 ± 0.10	0.5 ± 0.10	0.5 ± 0.10	0.25 ± 0.1
TSCM1005K-151T01	150	100	100	0.30	1.0 ± 0.10	0.5 ± 0.10	0.5 ± 0.10	0.25 ± 0.1
TSCM1005K-221T01	220	100	100	0.40	1.0 ± 0.10	0.5 ± 0.10	0.5 ± 0.10	0.25 ± 0.1
TSCM1005K-301T01	300	100	100	0.50	1.0 ± 0.10	0.5 ± 0.10	0.5 ± 0.10	0.25 ± 0.1
TSCM1005K-471T01	470	100	100	0.65	1.0 ± 0.10	0.5 ± 0.10	0.5 ± 0.10	0.25 ± 0.1
TSCM1005K-601T01	600	100	80	0.80	1.0 ± 0.10	0.5 ± 0.10	0.5 ± 0.10	0.25 ± 0.1

Tape and reel packaging										
Dimension L x W x H	575018	453215	451616	322513	321616	321611	201212	201209	160808	100505
Chip/Reel	500	1000	2000	2500	2000	3000	2000	4000	4000	4000
Inner Box	2000	4000	8000	12500	10000	15000	10000	20000	20000	20000
Middle Box	10000	20000	40000	62500	50000	75000	50000	100000	100000	100000
Carton	20000	40000	80000	125000	100000	150000	100000	200000	200000	200000

UNIT OF MEASUREMENT: MM

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