

Clamp Filters (Ferrite Core with Case)

For automotive ECU/Cable

ZCAT series

Type: **ZCAT-V-BK**
 ZCAT

Issue date: December 2010

- All specifications are subject to change without notice.
 - Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.
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Clamp Filters For Cable

Conformity to RoHS Directive

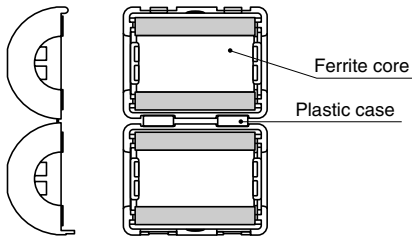
ZCAT-V-BK Series

FEATURES

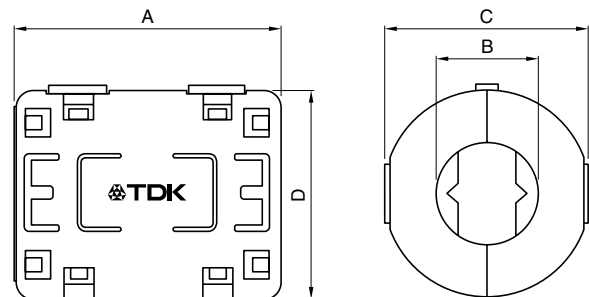
- Can easily be attached without cutting the cable.
- Possesses better mechanical strength and operational temperature range (−40 to + 125°C) than existing products.
- The plastic case has a self-sustaining mechanism that prevents slipping on the cable after being clamped.
- Possesses excellent high-frequency noise absorption effect.
- Works against common mode noise, allowing for noise suppression without affecting signal quality.
- Effective for EMS (Electromagnetic Susceptibility), immunity against surges/noise.



INTERNAL CONSTRUCTION



SHAPES AND DIMENSIONS



Dimensions in mm

Part No.	A	B	C	D	Applicable cable outer dia.	Weight (g)
ZCAT08V-BK	32.5	8.0	17.4	18.5	8.0 max.	16.0
ZCAT12V-BK	34.6	12.0	26.2	27.0	12.0 max.	43.0

APPLICATIONS

Best for providing noise suppression of in-vehicle ECUs.

PRODUCT IDENTIFICATION

ZCAT	12	V	–	BK
(1)	(2)	(3)	(4)	

- (1) Series name
- (2) Max external diameter of the cable to which the product is applied (mm)
- (3) Usage mark In-vehicle: V=Vehicle
- (4) Outer color code
BK: Only Black

SPECIFICATIONS

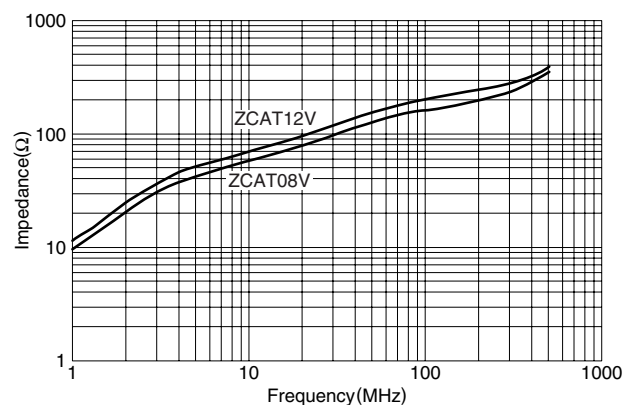
Part No.	ZCAT08V-BK	ZCAT12V-BK
Impedance	120Ω min. [50 to 500MHz]	140Ω min. [50 to 500MHz]
Operating temperature range	−40 to +125°C	
Temperature range for engagement work	0 to +50°C	
Operating humidity range	10 to 95(%)RH [Maximum wet-bulb temperature: 38.5°C]	

- Test conditions
Impedance meter or equivalent/ø1mm solder plated copper wire passes through(1ts)/Unloaded

PACKAGING STYLE AND QUANTITIES

Type	Quantity
ZCAT08V-BK	350 pieces/box
ZCAT12V-BK	120 pieces/box

TYPICAL ELECTRICAL CHARACTERISTICS IMPEDANCE vs. FREQUENCY CHARACTERISTICS



• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

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Clamp Filters For Cable

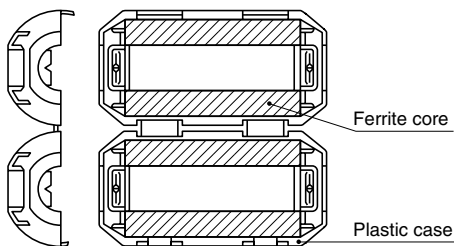
Conformity to RoHS Directive

ZCAT Series

FEATURES

- Unique plastic case ensures simple, convenient installation and includes a self-holding mechanism to prevent slippage on cables.
- Ferrite core provides excellent absorption of high-frequency EMC.
- Highly effective as countermeasure against common mode EMC without adverse effect on signal quality.
- Large core size prevents saturation during large signal surges.

INTERNAL CONSTRUCTION



APPLICATIONS

Personal computers, word processors, monitors, hard disk drives, digital telephones, audio devices, electronic musical instruments, video games, copiers and facsimiles.

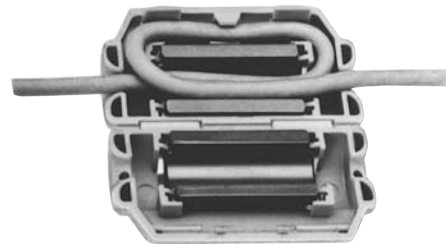
PRODUCT IDENTIFICATION

ZCAT	24	36	—	13	30	A	—	BK
(1)	(2)	(3)		(4)	(5)	(6)		(7)

- (1) Series name
 (2) Outer dimensions(mm)
 (3) Length(mm)
 (4) Inner dimensions(mm)
 (5) Material code
 (6) Fixed type code
 A: Cable fixed
 Hold the cable to secure it with the main body
 AP: Cable fixed
 (with lock mechanism)
 B: Clamp fixed
 C: Cable coil securing type
 (Coil the cable one time within the case to fix it/with lock mechanism.)
 D: Flat cable type
 DT: Flat cable type (Hold with adhesive pad.)
 Non code: Band fixed
 (Secure the cable and main body with the nylon belt.)
 (7) Outer color code
 BK: Black
 Non code: Gray



ZCAT-C TYPE



PACKAGING STYLE AND QUANTITIES

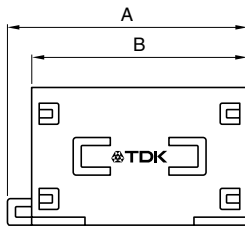
Part No.	Quantity
ZCAT3035	200 pieces/box
ZCAT2017-B	350 pieces/box
ZCAT2235	400 pieces/box
ZCAT2436	400 pieces/box
ZCAT2032	420 pieces/box
ZCAT2035	480 pieces/box
ZCAT2132	480 pieces/box
ZCAT2749	400 pieces/box
ZCAT1730	840 pieces/box
ZCAT2017	640 pieces/box
ZCAT1325	1344 pieces/box
ZCAT1518	896 pieces/box
ZCAT1525	900 pieces/box
ZCAT3618-D	480 pieces/box
ZCAT4625-D	240 pieces/box
ZCAT6819-D	160 pieces/box

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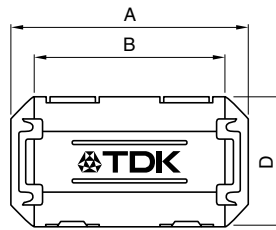
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SHAPES AND DIMENSIONS

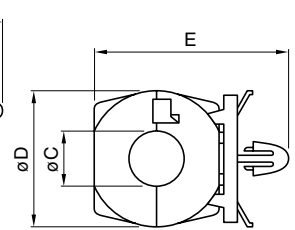
ZCAT TYPE



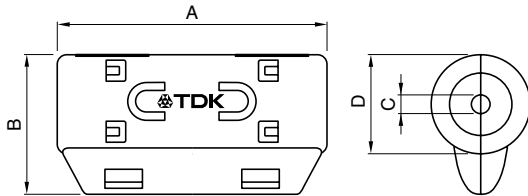
ZCAT-A, ZCAT-AP TYPE



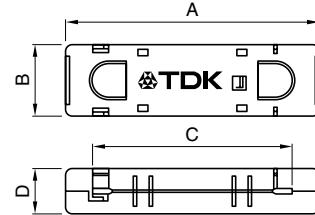
ZCAT-B TYPE



ZCAT-C TYPE



ZCAT-D TYPE



Applicable cable thickness:
1.3mm max.

Dimensions in mm

Part No.	A	B	øC	øD	E	Applicable cable outer dia.	Weight(g)	Impedance freq. characteristics Fig.
ZCAT1518-0730(BK)* ¹	22±1	18±1	7±1	15±1	—	7max.	6	1
ZCAT2017-0930(-BK)* ¹	21±1	17±1	9±1	20±1	—	9max.	11	2
ZCAT2032-0930(-BK)* ¹	36±1	32±1	9±1	19.5±1	—	9max.	22	3
ZCAT2132-1130(-BK)* ¹	36±1	32±1	11±1	20.5±1	—	11max.	22	4
ZCAT3035-1330(-BK)* ¹	39±1	34±1	13±1	30±1	—	13max.	63	5
ZCAT1525-0430AP(-BK)	25±1	20±1	4±1	15±1	11.5±1	2.5 to 4(USB)	7	4
ZCAT1325-0530A(-BK)	25±1	20±1	5±1	12.8±1	11.2±1	3 to 5(USB)	7	4
ZCAT1730-0730A(-BK)	30±1	23±1	7±1	16.5±1	15±1	4 to 7(USB/IEEE1394)	12	6
ZCAT2035-0930A(-BK)	35±1	28±1	9±1	19.5±1	17.4±1	6 to 9	22	3
ZCAT2235-1030A(-BK)	35±1	28±1	10±1	21.5±1	20±1	8 to 10	27	7
ZCAT2436-1330A(-BK)	36±1	29±1	13±1	23.5±1	22±1	10 to 13	29	8
ZCAT2017-0930B(-BK)	21±1	17±1	9±1	20±1	28.5±1	9max.	12	2
ZCAT2749-0430C(-BK)	49±1	27±1	4.5±1	19.5±1	—	4.5max.	26	9
ZCAT3618-2630D(-BK)	33.5±1	17.5±1	26±1	11.5±1	—	For 20 wires flat cable	15	10
ZCAT3618-2630DT(-BK)* ²	33.5±1	17.5±1	26±1	12.5±1	—	For 20 wires flat cable	15	10
ZCAT4625-3430D(-BK)	45.5±1	24.5±1	34±1	12±1	—	For 26 wires flat cable	32	11
ZCAT4625-3430DT(-BK)* ²	45.5±1	24.5±1	34±1	13±1	—	For 26 wires flat cable	32	11
ZCAT6819-5230D(-BK)	67.5±1	18.5±1	52±1	16±1	—	For 40 wires flat cable	58	11
ZCAT6819-5230DT(-BK)* ²	67.5±1	18.5±1	52±1	17±1	—	For 40 wires flat cable	58	11

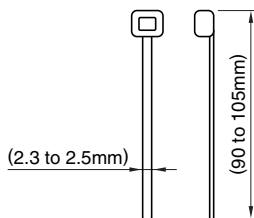
*¹ These products are delivered with fixed band.

*² ZCAT-DT type: Adapted for flat cables and hold with adhesive pad.

• ZCAT-B type: Clamp fixed type installation hole diameter ø4.8 to 4.9mm, thickness of board 0.5 to 2mm.

• ZCAT-AP, ZCAT-C type: Once closed, the case will not be easily opened manually.

STRUCTURE OF THE MOUNTING BAND



Material: 66-nylon(natural color)

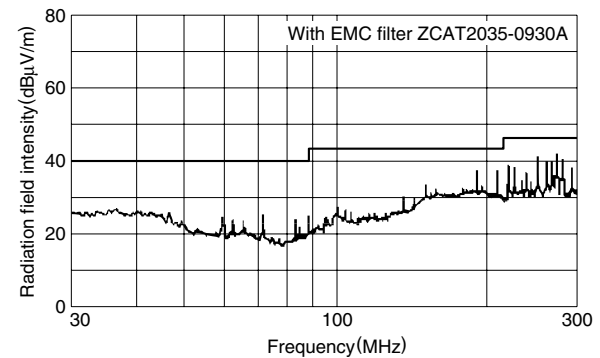
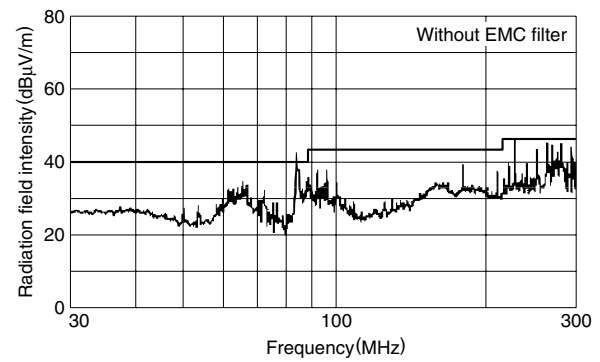
ELECTRICAL CHARACTERISTICS

Part No.	Impedance (Ω) min.		
	[10 to 100MHz]	[100 to 500MHz]	[50 to 500MHz]
ZCAT1518-0730(-BK)	25	50	—
ZCAT2017-0930(-BK)	20	50	—
ZCAT2032-0930(-BK)	50	100	—
ZCAT2132-1130(-BK)	40	80	—
ZCAT3035-1330(-BK)	80	150	—
ZCAT1525-0430AP(-BK)	50	100	—
ZCAT1325-0530A(-BK)	50	100	—
ZCAT1730-0730A(-BK)	40	80	—
ZCAT2035-0930A(-BK)	50	100	—
ZCAT2235-1030A(-BK)	50	100	—
ZCAT2436-1330A(-BK)	30	80	—
ZCAT2017-0930B(-BK)	20	50	—
ZCAT2749-0430C(-BK)	50	100	—
ZCAT3618-2603D(T)(-BK)	—	—	30
ZCAT4625-3430D(T)(-BK)	—	—	35
ZCAT6819-5230D(T)(-BK)	—	—	35

- Test conditions: R-X meter at unloaded condition, $\phi 1$ mm solder plated copper wire passes through.

TYPICAL EMC SUPPRESSION EFFECTS

RADIATION LEVEL vs. FREQUENCY CHARACTERISTICS



TYPICAL ELECTRICAL CHARACTERISTICS

IMPEDANCE vs. FREQUENCY CHARACTERISTICS

ZCAT1518-0730

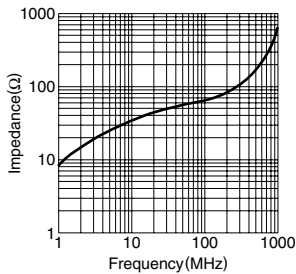


Fig.1

ZCAT2017-0930

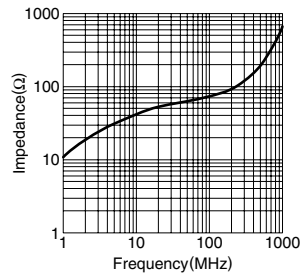


Fig.2

ZCAT2032-0930
ZCAT2035-0930A

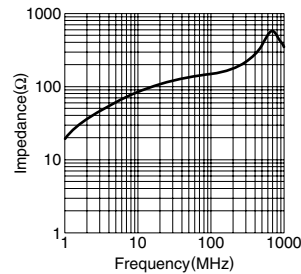


Fig.3

ZCAT1525-0430AP
ZCAT2132-1130
ZCAT1325-0530A

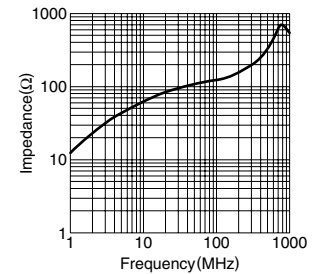


Fig.4

ZCAT3035-1330

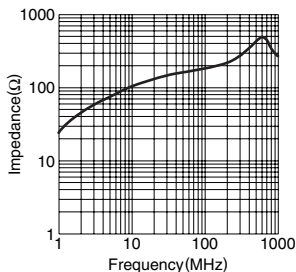


Fig.5

ZCAT1730-0730A

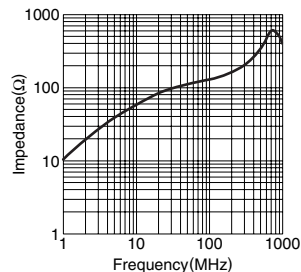


Fig.6

ZCAT2235-1030A

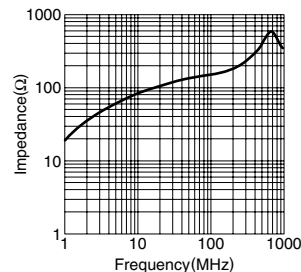


Fig.7

ZCAT2436-1330A

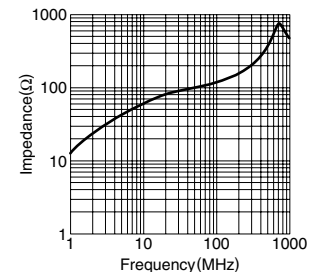


Fig.8

TYPICAL ELECTRICAL CHARACTERISTICS

IMPEDANCE vs. FREQUENCY CHARACTERISTICS

ZCAT2749-0430C

ZCAT3618-2630D

ZCAT4625-3430D

ZCAT6819-5230D

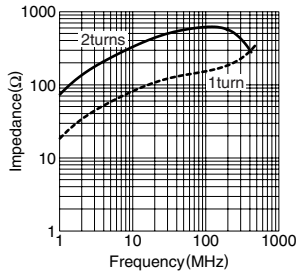


Fig.9

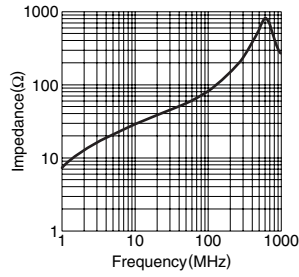


Fig.10

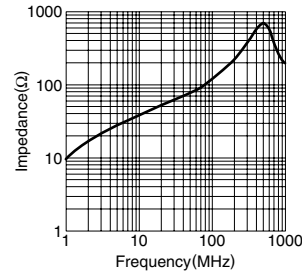


Fig.11