

# Clamp Filters (Ferrite Core with Case)

For cable

ZCAT series

Type:           ZCAT  
                  ZCAT-A  
                  ZCAT-B  
                  ZCAT-D/-DT

Issue date:     April 2013

- 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 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.

### 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)		(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  
 B: Clamp fixed  
 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

### TEMPERATURE RANGES

Operating temperature range	-40 to +85°C
Temperature range for engagement work	0 to +50°C



### PACKAGING STYLE AND QUANTITIES

Type	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
ZCAT1730	840 pieces/box
ZCAT2017	640 pieces/box
ZCAT1325	1344 pieces/box
ZCAT1518	896 pieces/box
ZCAT3618-D	480 pieces/box
ZCAT4625-D	240 pieces/box
ZCAT6819-D	160 pieces/box
ZCAT10D	770 pieces/box
ZCAT13D	450 pieces/box
ZCAT20D	320 pieces/box

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## SHAPES AND DIMENSIONS

### ZCAT



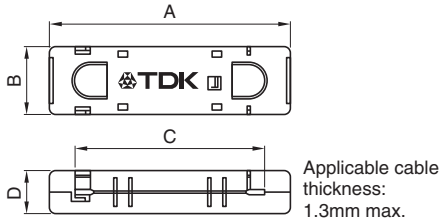
### ZCAT-A



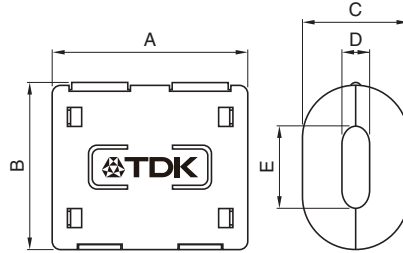
### ZCAT-B



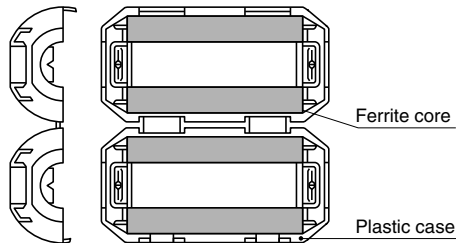
### ZCAT-D, ZCAT-DT



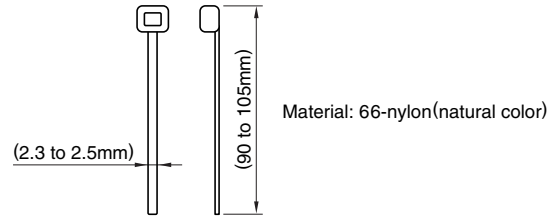
### ZCAT10D, 13D, 20D



## INTERNAL CONSTRUCTION



## STRUCTURE OF THE MOUNTING BAND



Part No.	Dimensions in mm					Applicable cable outer diameter	Weight (g)	Impedance freq. characteristics Fig.
	A	B	C	D	E			
ZCAT1518-0730(-BK)*1	22±1	18±1	7±1	15±1	–	7max.	6.1	1
ZCAT2017-0930(-BK)*1	21±1	17±1	9±1	20±1	–	9max.	11.0	2
ZCAT2032-0930(-BK)*1	36±1	32±1	9±1	19.5±1	–	9max.	22.7	3
ZCAT2132-1130(-BK)*1	36±1	32±1	11±1	20.5±1	–	11max.	21.6	4
ZCAT3035-1330(-BK)*1	39±1	34±1	13±1	30±1	–	13max.	64.8	5
ZCAT1325-0530A(-BK)	25±1	20±1	5±1	12.8±1	11.2±1	3 to 5(USB)	6.37	4
ZCAT1730-0730A(-BK)	30±1	23±1	7±1	16.5±1	15±1	4 to 7(USB/IEEE1394)	11.6	6
ZCAT2035-0930A(-BK)	35±1	28±1	9±1	19.5±1	17.4±1	6 to 9	21.2	3
ZCAT2235-1030A(-BK)	35±1	28±1	10±1	21.5±1	20±1	8 to 10	26.0	7
ZCAT2436-1330A(-BK)	36±1	29±1	13±1	23.5±1	22±1	10 to 13	29.0	8
ZCAT2017-0930B(-BK)	21±1	17±1	9±1	20±1	(29)	9max.	11.5	2
ZCAT3618-2630D(-BK)	33.5±1	17.5±1	26±1	11.5±1	–	For 20 wires flat cable	15.6	9
ZCAT3618-2630DT(-BK)*2	33.5±1	17.5±1	26±1	12.5±1	–	For 20 wires flat cable	15.6	9
ZCAT4625-3430D(-BK)	45.5±1	24.5±1	34±1	12±1	–	For 26 wires flat cable	32.5	10
ZCAT4625-3430DT(-BK)*2	45.5±1	24.5±1	34±1	13±1	–	For 26 wires flat cable	32.5	10
ZCAT6819-5230D(-BK)	67.5±1	18.5±1	52±1	16±1	–	For 40 wires flat cable	58.4	10
ZCAT6819-5230DT(-BK)*2	67.5±1	18.5±1	52±1	17±1	–	For 40 wires flat cable	58.4	10
ZCAT 10D(-BK)	27±1	14.5±1	10±1	4±1	7±1	4max.	5.6	11
ZCAT 13D(-BK)	34±1	20±1	13±1	5±1	8.5±1	5max.	14.8	12
ZCAT 20D(-BK)	35±1	30±1	20±1	5±1	15±1	5max.	46.3	13

\*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  $\phi$ 4.8 to 4.9mm, thickness of board 0.5 to 2mm.

## ELECTRICAL CHARACTERISTICS

Part No.	Impedance ( $\Omega$ ) 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	—
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	—
ZCAT3618-2630D(T)(-BK)	—	—	30
ZCAT4625-3430D(T)(-BK)	—	—	35
ZCAT6819-5230D(T)(-BK)	—	—	35
ZCAT 10D(-BK)	25	70	—
ZCAT 13D(-BK)	40	100	—
ZCAT 20D(-BK)	60	150	—

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

## TYPICAL EMC SUPPRESSION EFFECTS

### RADIATION LEVEL vs. FREQUENCY CHARACTERISTICS

Without EMC filter



With EMC filter ZCAT2035-0930A



**TYPICAL ELECTRICAL CHARACTERISTICS**  
**IMPEDANCE vs. FREQUENCY CHARACTERISTICS**

**ZCAT1518-0730**



Fig.1

**ZCAT2017-0930**  
**ZCAT2017-0930B**

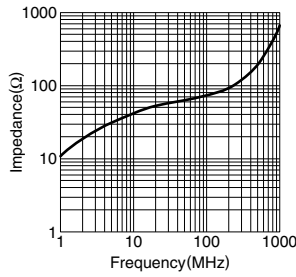


Fig.2

**ZCAT2032-0930**  
**ZCAT2035-0930A**

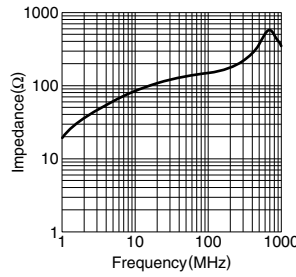


Fig.3

**ZCAT2132-1130**  
**ZCAT1325-0530A**

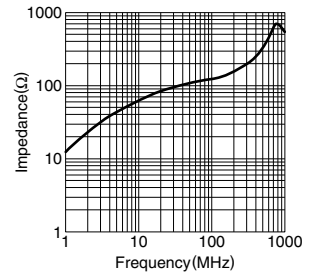


Fig.4

**ZCAT3035-1330**



Fig.5

**ZCAT1730-0730A**

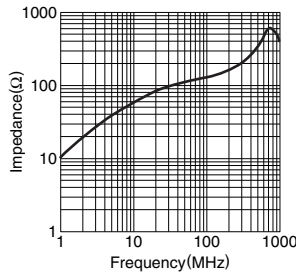


Fig.6

**ZCAT2235-1030A**

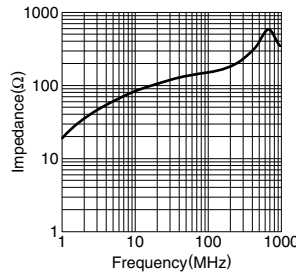


Fig.7

**ZCAT2436-1330A**

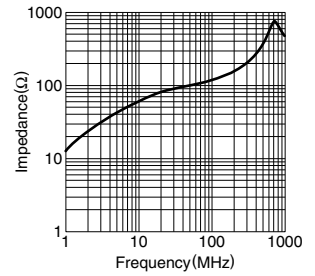


Fig.8

**ZCAT3618-2630D(T)**



Fig.9

**ZCAT4625-3430D(T)**  
**ZCAT6819-5230D(T)**

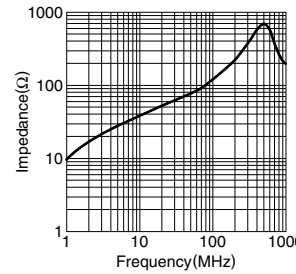


Fig.10

**ZCAT10D**

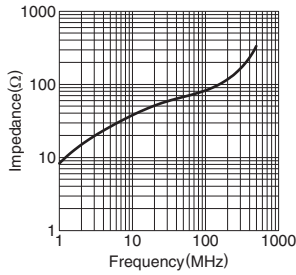


Fig.11

**ZCAT13D**

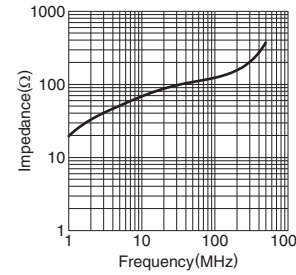


Fig.12

**ZCAT20D**

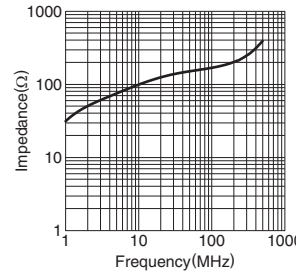


Fig.13

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