

# Clamp Filters (Ferrite Core with Case)

For cable

## ZCAT series

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

Issue date:     February 2012

- 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.

# 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)

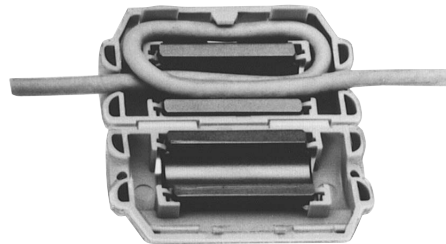
- (1) Series name  
 (2) Outer dimensions(mm)  
 (3) Length(mm)  
 (4) Inner dimensions(mm)  
 (5) Material code  
 (6) Fixed type code  
     A: Cable fixed  
         Hold the cable to secure it with the main body  
     AP: Cable fixed (with lock mechanism)  
     B: Clamp fixed  
     C: Cable coil 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

### TEMPERATURE RANGES

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



### ZCAT-C TYPE



### PACKAGING STYLE AND QUANTITIES

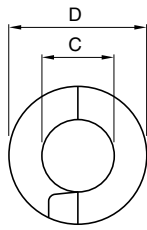
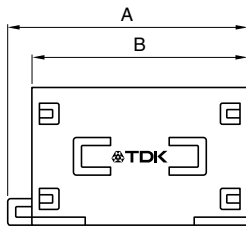
Type	Quantity
ZCAT3035	200 pieces/box
ZCAT2017-B	350 pieces/box
ZCAT2235	400 pieces/box
ZCAT2436	400 pieces/box
ZCAT2032	420 pieces/box
ZCAT2035	480 pieces/box
ZCAT2132	480 pieces/box
ZCAT2749	400 pieces/box
ZCAT1730	840 pieces/box
ZCAT2017	640 pieces/box
ZCAT1325	1344 pieces/box
ZCAT1518	896 pieces/box
ZCAT1525	900 pieces/box
ZCAT3618-D	480 pieces/box
ZCAT4625-D	240 pieces/box
ZCAT6819-D	160 pieces/box
ZCAT10D	770 pieces/box
ZCAT13D	500 pieces/box
ZCAT20D	280 pieces/box

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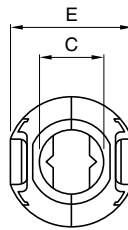
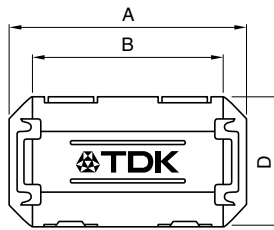
• All specifications are subject to change without notice.

## SHAPES AND DIMENSIONS

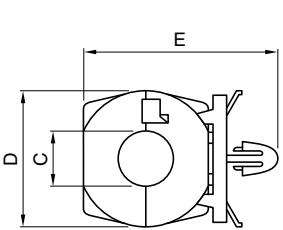
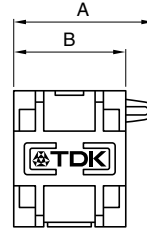
### ZCAT



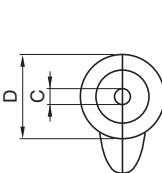
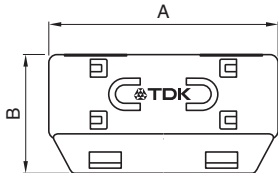
### ZCAT-A, ZCAT-AP



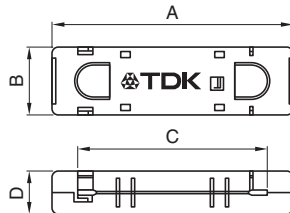
### ZCAT-B



### ZCAT-C

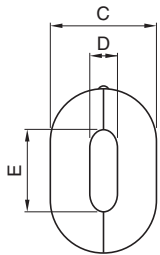
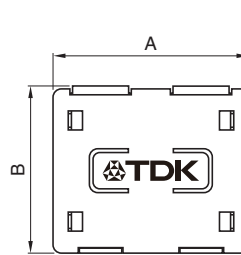


### ZCAT-D, ZCAT-DT

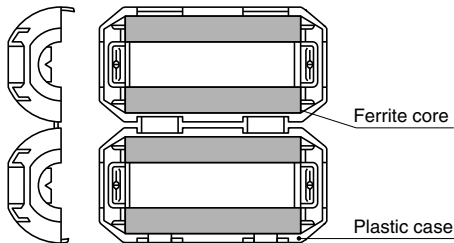


Applicable cable  
thickness:  
1.3mm max.

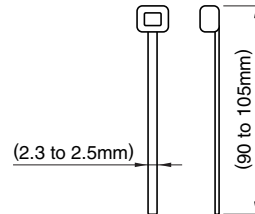
### ZCAT10D, 13D, 20D



## INTERNAL CONSTRUCTION



## STRUCTURE OF THE MOUNTING BAND



Material: 66-nylon(natural color)

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.	7.0	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
ZCAT1525-0430AP(-BK)	25±1	20±1	4±1	14.85±1	11.5±1	2.5 to 4(USB)	7.0	4
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
ZCAT2749-0430C(-BK)	49±1	27±1	4.5±1	19.5±1	—	4.5max.	25.0	9
ZCAT3618-2630D(-BK)	33.5±1	17.5±1	26±1	11.5±1	—	For 20 wires flat cable	15.6	10
ZCAT3618-2630DT(-BK)*2	33.5±1	17.5±1	26±1	12.5±1	—	For 20 wires flat cable	15.6	10
ZCAT4625-3430D(-BK)	45.5±1	24.5±1	34±1	12±1	—	For 26 wires flat cable	32.5	11
ZCAT4625-3430DT(-BK)*2	45.5±1	24.5±1	34±1	13±1	—	For 26 wires flat cable	32.5	11
ZCAT6819-5230D(-BK)	67.5±1	18.5±1	52±1	16±1	—	For 40 wires flat cable	58.4	11
ZCAT6819-5230DT(-BK)*2	67.5±1	18.5±1	52±1	17±1	—	For 40 wires flat cable	58.4	11
ZCAT 10D(-BK)	27±1	14.5±1	10±1	4±1	7±1	4max.	5.6	12
ZCAT 13D(-BK)	34±1	20±1	13±1	5±1	8.5±1	5max.	14.8	13
ZCAT 20D(-BK)	35±1	30±1	20±1	5±1	15±1	5max.	46.3	14

\*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.

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

## ELECTRICAL CHARACTERISTICS

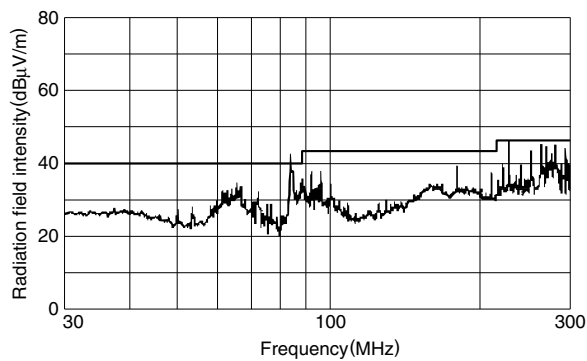
Part No.	Impedance ( $\Omega$ ) min.		
	[10 to 100MHz]	[100 to 500MHz]	[50 to 500MHz]
ZCAT1518-0730(-BK)	25	50	—
ZCAT2017-0930(-BK)	20	50	—
ZCAT2032-0930(-BK)	50	100	—
ZCAT2132-1130(-BK)	40	80	—
ZCAT3035-1330(-BK)	80	150	—
ZCAT1525-0430AP(-BK)	50	100	—
ZCAT1325-0530A(-BK)	50	100	—
ZCAT1730-0730A(-BK)	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	—
ZCAT3618-2630D(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.

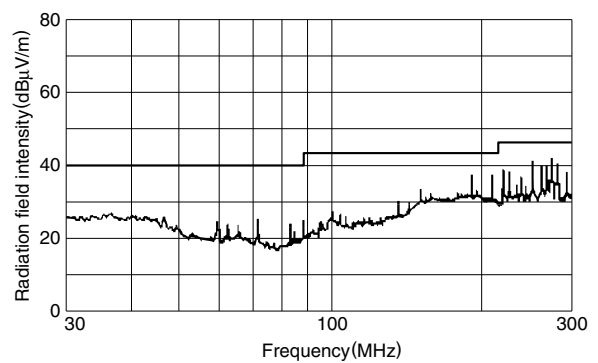
## TYPICAL EMC SUPPRESSION EFFECTS

### RADIATION LEVEL vs. FREQUENCY CHARACTERISTICS

#### Without EMC filter



#### With EMC filter ZCAT2035-0930A



# TYPICAL ELECTRICAL CHARACTERISTICS

## IMPEDANCE vs. FREQUENCY CHARACTERISTICS

**ZCAT1518-0730**

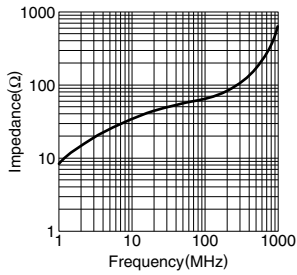


Fig.1

**ZCAT2017-0930**

**ZCAT2017-0930B**

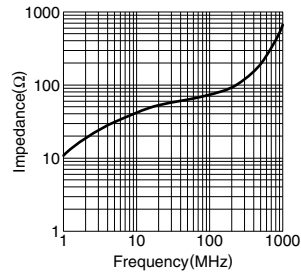


Fig.2

**ZCAT2032-0930**

**ZCAT2035-0930A**

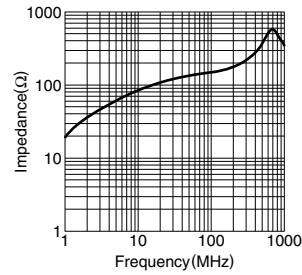


Fig.3

**ZCAT2132-1130**

**ZCAT1525-0430AP**

**ZCAT1325-0530A**

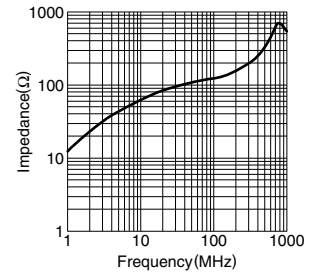


Fig.4

**ZCAT3035-1330**

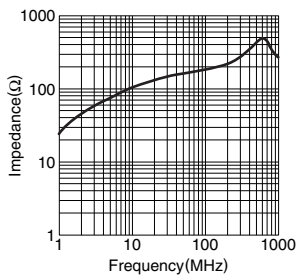


Fig.5

**ZCAT1730-0730A**

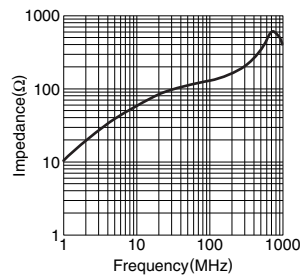


Fig.6

**ZCAT2235-1030A**

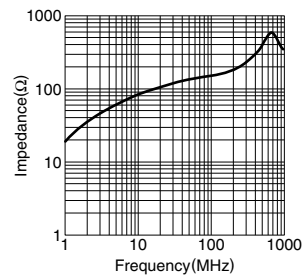


Fig.7

**ZCAT2436-1330A**

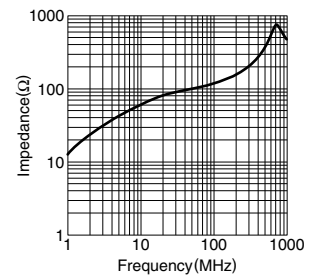


Fig.8

**ZCAT2749-0430C**

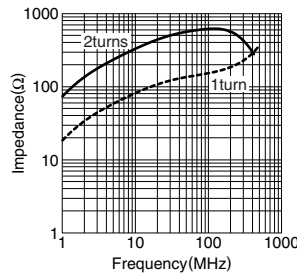


Fig.9

**ZCAT3618-2630D(T)**

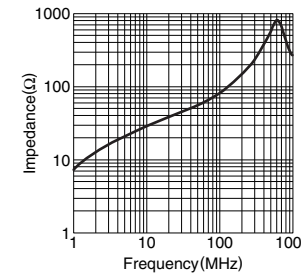


Fig.10

**ZCAT4625-3430D(T)**

**ZCAT6819-5230D(T)**

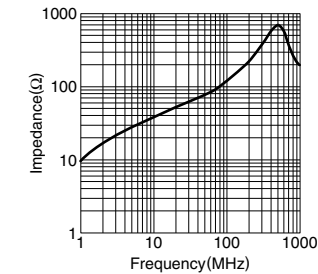


Fig.11

**ZCAT10D**

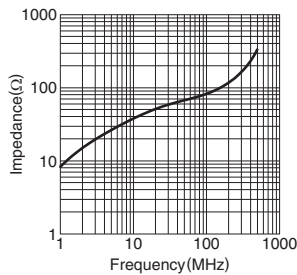


Fig.12

**ZCAT13D**

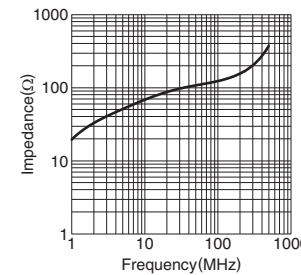


Fig.13

**ZCAT20D**

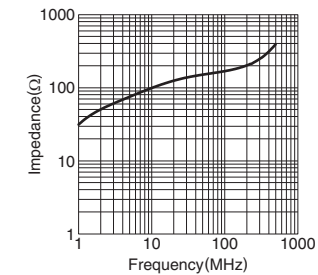


Fig.14