

Mid-high Voltage Ceramic Capacitors(Disk with Lead)

Safety Standard Approved CS Series

Conformity to RoHS Directive

BASIC INSULATION TYPE Temperature range: -25 to +105°C
CLASS 2 HIGH DIELECTRIC

FEATURES

- Smaller than conventional capacitors.
- Flame-resistant reinforced outer insulation prevents fires, electrical shock, and other potential hazards.
- Compliant with the safety standards of 11 countries.

PRODUCT IDENTIFICATION

CS	11	-E	2GA	222	M	Y	N	S
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

- (1) Type
 (2) Shape
 (3) Capacitance temperature characteristics
 (4) Rated voltage
 (5) Nominal capacitance
 (6) Capacitance tolerance
 (7) Class
 (8) Lead type
 (9) Safety standard

MARKINGS

Item	Marking examples	
1. Series	CS	
2. Nominal capacitance	222(2200pF)	
3. Capacitance tolerance	M(±20%)	
4. Rated voltage Eac	250V ~ (AC.250V)	
5. Sub-class of safety performance	X1Y2	
6. TDK's logogram		
7. Date code	94	
8. Regulatory body safety standards compliance markings	BSI (U.K.) BSI SEV (Switzerland) TJ508 FIMKO (Finland) NEMKO (Norway) SEMKO (Sweden) UL (U.S.A.) DEMKO (Denmark) IMQ (Italy) VDE (Germany) CSA (Canada)	
	Front	Back
	(Marking position of the monogram is reference.)	

* Year and month of production: last digit of year + month denoted by 1, 2, 3, 4, 5, 6, 7, 8, 9, O (October), N (November), or D (December).

INTERNATIONALLY CERTIFIED STATUS

IEC60384-14 EN60384-14 Approved

Safety standard	Standard No. of IEC	Standard No.	Temperature characteristics	Insulation sub-class	Rated voltage Eac(V)	Approval report No.		
						Japan	Taiwan	Xiamen
BSI	IEC 60065 IEC 60384-14	BS EN 60065(8.8.14.2) BS EN60384-14	B, E, F	X1, Y2	250	226494	226494	226494
VDE	IEC 60384-14	EN60384-14	B, E, F	X1, Y2	250	138559	138560	122006
SEV	IEC 60384-14	EN60384-14	B, E, F	X1, Y2	250	08.0890	08.0890	08.0890
SEMKO	IEC 60384-14	EN60384-14	B, E, F	X1, Y2	250	0139186/01-02	0139186/01-02	9945094
NEMKO	IEC 60384-14	EN60384-14	B, E, F	X1, Y2	250	P01101988	P01101988	P99102682
DEMKO	IEC 60384-14	EN60384-14	B, E, F	X1, Y2	250	310966-01	310966-01	99-04087
FIMKO	IEC 60384-14	EN60384-14	B, E, F	X1, Y2	250	FI 17416	FI 17416	FI 24306
IMQ	IEC 60384-14	EN60384-14	B, E, F	X1, Y2	250	V3692	V3692	V3692
SAA	IEC 60065	AS3250	B, E, F	—	400	6268	6268	6268
UL	—	UL 1414	B, E, F	(X, Y)	250	E37861	E37861	E37861
CSA	—	CSA C22.2 No.0 & No.1	B, E, F	(X, Y)	250	LR35801	LR65972	LR65972

• Certificate numbers shall be changed owing to the revisions of the related standards.

• 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.

• All specifications are subject to change without notice.

CAPACITANCE AND DIMENSIONS

Part No.	Capacitance temperature characteristics	Capacitance (pF)	Capacitance tolerance	Dimensions (mm)			Taping dimensions
				D max.	F	ød	
CS70-B2GA101KY□S	B(±10%)	100	K(±10%)	7	7.5±1.5	0.6±0.05	V2
CS70-B2GA151KY□S		150	K(±10%)	7	7.5±1.5	0.6±0.05	V2
CS70-B2GA221KY□S		220	K(±10%)	7	7.5±1.5	0.6±0.05	V2
CS85-B2GA331KY□S		330	K(±10%)	8.5	7.5±1.5	0.6±0.05	V2
CS85-B2GA471KY□S		470	K(±10%)	8.5	7.5±1.5	0.6±0.05	V2
CS95-B2GA681KY□S		680	K(±10%)	9.5	7.5±1.5	0.6±0.05	V2
CS10-B2GA102KY□S	E(+20, -55%)	1,000	K(±10%)	10	7.5±1.5	0.6±0.05	V2
CS80-E2GA102MY□S		1,000	M(±20%)	8	7.5±1.5	0.6±0.05	V2
CS90-E2GA152MY□S		1,500	M(±20%)	9	7.5±1.5	0.6±0.05	V2
CS11-E2GA222MY□S		2,200	M(±20%)	10.5	7.5±1.5	0.6±0.05	V2
CS13-E2GA332MY□S		3,300	M(±20%)	12.5	7.5±1.5	0.6±0.05	V2
CS14-E2GA392MY□S		3,900	M(±20%)	13.5	7.5±1.5	0.6±0.05	V2
CS15-E2GA472MY□S	F(+30, -80%)	4,700	M(±20%)	14.5	7.5±1.5	0.6±0.05	V3
CS12-F2GA472MY□S		4,700	M(±20%)	12	7.5±1.5	0.6±0.05	V2
CS17-F2GA103MY□S		1,0000	M(±20%)	16.5	10±2	0.6±0.05	—

* □ : Lead shape symbol

SHAPES AND DIMENSIONS

VERTICAL KINK LEAD TYPE

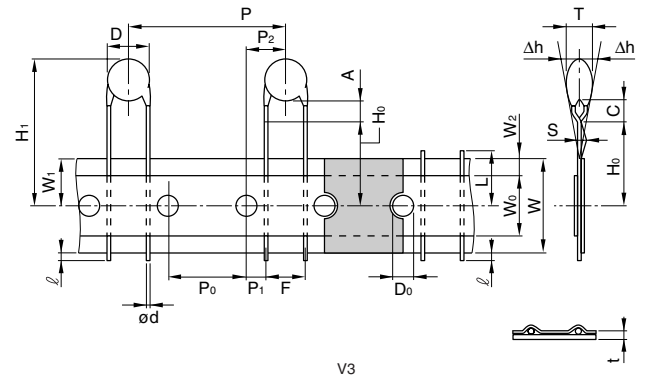
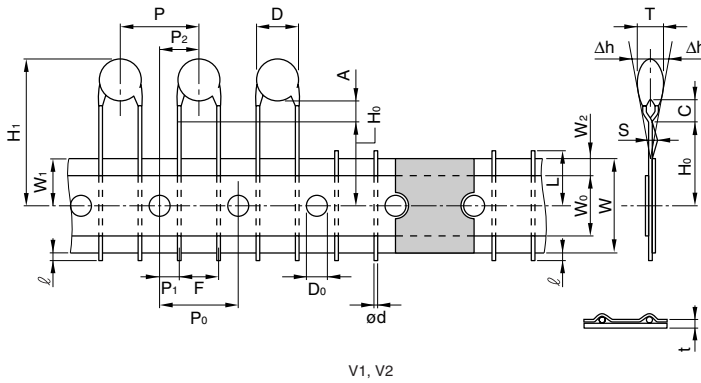
Dimensions in mm

	Long lead Symbol G	Short lead Symbol N	Taping Symbol V
Vertical kink			

- We recommend using a vertical kink type.
- For bulk products, we recommend a short lead type with the symbol N.

TAPING DIMENSIONS

VERTICAL KINK LEAD TYPE



Item	Symbol	Dimensions(mm)			Remarks
		V1	V2	V3	
Body diameter	D	Depends on the specification of each product.			
Body thickness	T	Depends on the specification of each product.			
Lead-wire diameter	ød	0.6±0.05	0.6±0.05	0.6±0.05	
Pitch of component	P	12.7±1.0	15.0±1.0	30.0±1.0	Including the slant of body
Feed hole pitch	P0	12.7±0.3	15.0±0.3	15.0±0.3	Excepting the tape splicing part
Feed hole center to lead	P1	3.85±0.7	3.75±0.7	3.75±0.7	
Feed hole center to component center	P2	6.35±1.3	7.5±1.3	7.5±1.3	Including the slanting body due to bending lead-wire
Lead-to lead distance	F	5+0.8, -0.2	7.5±0.8	7.5±0.8	Measuring point is bottom kink
Component alignment, F-R	Δh	0±2.0	0±2.0	0±2.0	Including the slanting body due to bending lead-wire
Tape width	W	18.0+1.0, -0.5	18.0+1.0, -0.5	18.0+1.0, -0.5	
Adhesive tape width	W0	11.5min.	11.5min.	11.5min.	
Hole position	W1	9.0±0.5	9.0±0.5	9.0±0.5	
Adhesive tape position	W2	3.0max.	3.0max.	3.0max.	Adhesive tape do not stick out the tape
Bottom of kink from tape center	H0	16.0+1.5, -0.5	16.0+1.5, -0.5	16.0+1.5, -0.5	
Height of body from tape center	H1	46.0max.	46.0max.	46.0max.	
Lead-wire protrusion	ℓ	1.0max.	1.0max.	1.0max.	
Feed hole diameter	D0	4.0±0.2	4.0±0.2	4.0±0.2	
Total tape tickness	t	0.6±0.3	0.6±0.3	0.6±0.3	Including adhesive tape
Length of snapped lead	L	11.0max.	11.0max.	11.0max.	
Coating on lead	C	4.0max.	4.0max.	4.0max.	
Height of kink	A	4.0max.	4.0max.	4.0max.	Measuring point is bottom kink
Spring action	S	2.0max.	2.0max.	2.0max.	

• For more information about products with other capacitance or other data, please contact us.

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