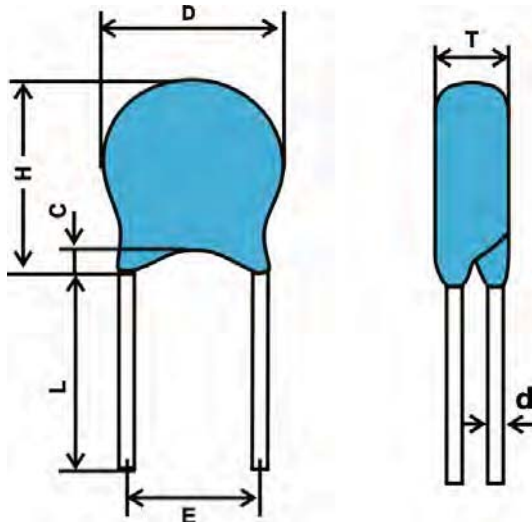


## VAR Series Zinc Oxide Varistor (6KV/3KA Series)

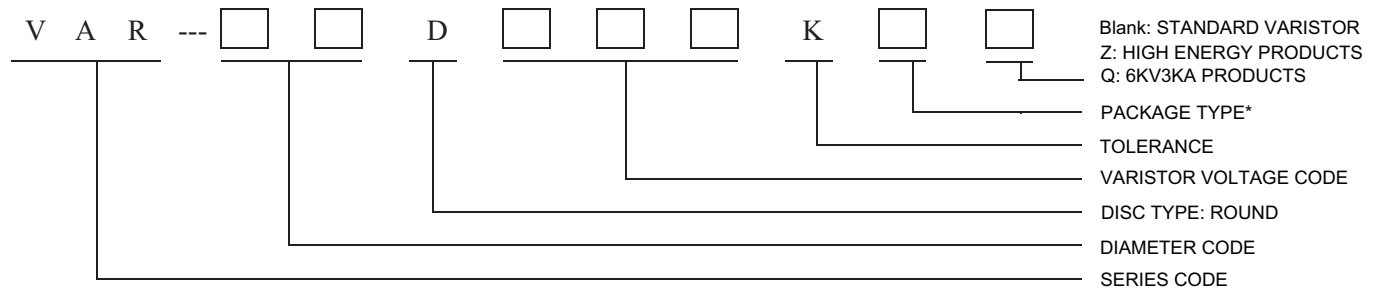
### FEATURES

- ◆ Round Zinc Oxide Varistor, leaded
- ◆ Coating: epoxy resin, flame-retardant material
- ◆ Operating Temperature Range: -40°C~+125°C
- ◆ Wide operating voltage
- ◆ Approvals: CQC, UL, VDE
- ◆ RoHS 2011/65/EU; REACH Compliant
- ◆ Standard & High Energy Series on request

### DIMENSION



L:16mm min







\*Packing Type: Code B means bulk package, standard leg length;  
 Code C means bulk package, cut leg  
 Code A means Ammo Taped in box  
 Code R means Taped & Reel





## VAR Series Zinc Oxide Varistor (6KV/3KA Series)

### Dimensions & Safety Approvals

#### 10D 6KV/3KA series

P/N	Dimension (mm)						Safety Approvals			
	Dmax	Tmax	L min	E±0.8	Φd±0.05	c Max				
VAR10D391K*Q	13.5	5.5	16	7.5	0.7	3	√	√	*	*
VAR10D431K*Q	13.5	6	16	7.5	0.7	3	*	*	*	*
VAR10D471K*Q	13.5	6	16	7.5	0.7	3	*	*	*	*
VAR10D511K*Q	13.5	6.5	16	7.5	0.7	3	*	*	*	*
VAR10D561K*Q	13.5	6.5	16	7.5	0.7	3	*	*	*	*
VAR10D621K*Q	13.5	7	16	7.5	0.7	3	*	*	*	*
VAR10D681K*Q	13.5	7.5	16	7.5	0.7	3	*	*	*	*
VAR10D751K*Q	13.5	7.5	16	7.5	0.7	3	*	√	√	√
VAR10D821K*Q	13.5	8	16	7.5	0.7	3	*	√	√	√
VAR10D911K*Q	13.5	8.5	16	7.5	0.7	3	*	√	√	√
VAR10D102K*Q	13.5	9	16	7.5	0.7	3	*	√	√	√
VAR10D112K*Q	13.5	10	16	7.5	0.7	3	*	x	√	√

#### 14D 6KV/3KA series





P/N	Dimension (mm)						Safety Approvals			
	Dmax	Tmax	L min	E±0.8	Φd±0.05	c Max				
VAR14D820K*Q	16.5	4	16	7.5	0.7	3	√	√	*	*
VAR14D101K*Q	16.5	4	16	7.5	0.7	3	√	√	*	*
VAR14D121K*Q	16.5	4	16	7.5	0.7	3	√	√	*	*
VAR14D151K*Q	16.5	4.5	16	7.5	0.7	3	√	√	*	*
VAR14D181K*Q	16.5	4.5	16	7.5	0.7	3	√	√	*	*
VAR14D201K*Q	16.5	4.5	16	7.5	0.7	3	√	√	*	*
VAR14D221K*Q	16.5	4.5	16	7.5	0.7	3	√	√	*	*
VAR14D241K*Q	16.5	4.5	16	7.5	0.7	3	√	√	*	*
VAR14D271K*Q	16.5	4.5	16	7.5	0.7	3	√	√	*	*
VAR14D301K*Q	16.5	4.5	16	7.5	0.7	3	√	√	*	*
VAR14D331K*Q	16.5	4.5	16	7.5	0.7	3	√	√	*	*
VAR14D361K*Q	16.5	5	16	7.5	0.7	3	√	√	*	*
VAR14D391K*Q	16.5	5	16	7.5	0.7	3	√	√	*	*

Note: "X" stands for uncertified; "√" stands for certified; "\*" stands for pass 6KV/3KA approval





## VAR Series Zinc Oxide Varistor (6KV/3KA Series)

### Dimensions & Safety Approvals

#### 14D 6KV/3KA series

P/N	Dimension (mm)						Safety Approvals			
	Dmax	Tmax	L min	E±0.8	Φd±0.05	c Max				
VAR14D431K*Q	16.5	5	16	7.5	0.7	3	*	*	*	*
VAR14D471K*Q	16.5	5.5	16	7.5	0.7	3	*	*	*	*
VAR14D511K*Q	16.5	5.5	16	7.5	0.7	3	*	*	*	*
VAR14D561K*Q	16.5	6	16	7.5	0.7	3	*	*	*	*
VAR14D621K*Q	16.5	6	16	7.5	0.7	3	*	*	*	*
VAR14D681K*Q	16.5	6.5	16	7.5	0.7	3	*	*	*	*
VAR14D751K*Q	16.5	6.5	16	7.5	0.7	3	*	*	*	*
VAR14D781K*Q	16.5	6.5	16	7.5	0.7	3	x	x	*	*
VAR14D821K*Q	16.5	7	16	7.5	0.7	3	*	*	*	*
VAR14D911K*Q	16.5	7.5	16	7.5	0.7	3	*	*	*	*
VAR14D102K*Q	16.5	7.5	16	7.5	0.7	3	*	*	*	*
VAR14D112K*Q	16.5	8	16	7.5	0.7	3	*	x	*	*
VAR14D182K*Q	16.5	12	16	7.5	0.7	3	x	x	*	*

#### 20D 6KV/3KA series





P/N	Dimension (mm)						Safety Approvals			
	Dmax	Tmax	L min	E±0.8	Φd±0.05	c Max				
VAR20D820K*Q	23	4	16	10	1	3	√	√	*	*
VAR20D101K*Q	23	4.5	16	10	1	3	√	√	*	*
VAR20D121K*Q	23	4.5	16	10	1	3	√	√	*	*
VAR20D151K*Q	23	5	16	10	1	3	√	√	*	*
VAR20D181K*Q	23	5	16	10	1	3	√	√	*	*
VAR20D201K*Q	23	5	16	10	1	3	√	√	*	*
VAR20D221K*Q	23	5.5	16	10	1	3	√	√	*	*
VAR20D241K*Q	23	5	16	10	1	3	√	√	*	*
VAR20D271K*Q	23	5	16	10	1	3	√	√	*	*
VAR20D301K*Q	23	5	16	10	1	3	√	√	*	*
VAR20D331K*Q	23	5	16	10	1	3	√	√	*	*
VAR20D361K*Q	23	5.5	16	10	1	3	√	√	*	*
VAR20D391K*Q	23	5.5	16	10	1	3	√	√	*	*

Note: "X" stands for uncertified; "V" stands for certified; "\*" stands for pass 6KV/3KA approval

## VAR Series Zinc Oxide Varistor (6KV/3KA Series)

### Dimensions & Safety Approvals

#### 20D 6KV/3KA series

P/N	Dimension (mm)						Safety Approvals			
	Dmax	Tmax	L min	E±0.8	Φd±0.05	c Max				
VAR20D431K*Q	23	5.5	16	10	1	3	*	*	*	*
VAR20D471K*Q	23	6	16	10	1	3	*	*	*	*
VAR20D511K*Q	23	6	16	10	1	3	*	*	*	*
VAR20D561K*Q	23	6.5	16	10	1	3	*	*	*	*
VAR20D621K*Q	23	6.5	16	10	1	3	*	*	*	*
VAR20D681K*Q	23	7	16	10	1	3	*	*	*	*
VAR20D751K*Q	23	7	16	10	1	3	*	*	*	*
VAR20D781K*Q	23	7.5	16	10	1	3	x	x	*	*
VAR20D821K*Q	23	7.5	16	10	1	3	*	*	*	*
VAR20D911K*Q	23	8	16	10	1	3	*	*	*	*
VAR20D102K*Q	23	8.5	16	10	1	3	*	*	*	*
VAR20D112K*Q	23	9	16	10	1	3	*	x	*	*
VAR20D182K*Q	23	12.5	16	10	1	3	x	x	*	*

Note: "X" stands for uncertified; "V" stands for certified; "\*" stands for pass 6KV/3KA approval

### SPECIFICATION (for 6KV/3KA Series)

#### 10D 6KV/3KA series

P/N	Maximum allowable Voltage		Varistor voltage	Clamping voltage (Max.)		Maximum Peak Current (8/20μs)		Maximum (10/1000μ)	Rated Power	Typical Capacitance
	AC rms (V)	DC rms (V)	V <sub>1.0mA</sub> (V)	VC (V)	IP (A)	1time (A)	2time (A)	(J)	(W)	1KHz (PF)
VAR10D391K*Q	250	320	390 (351~429)	650	25	3500	2500	81.2	0.4	300
VAR10D431K*Q	275	350	430 (387~473)	710	25	3500	2500	68.2	0.4	270
VAR10D471K*Q	300	385	470 (423~517)	775	25	3500	2500	99.4	0.4	230
VAR10D511K*Q	320	415	510 (459~61)	845	25	3500	2500	99.4	0.4	210
VAR10D561K*Q	350	460	560 (504~616)	925	25	3500	2500	99.4	0.4	180
VAR10D621K*Q	385	505	620 (558~682)	1025	25	3500	2500	102.2	0.4	190
VAR10D681K*Q	420	560	680 (612~748)	1120	25	3500	2500	102.2	0.4	170
VAR10D751K*Q	460	615	750 (675~825)	1240	25	3500	2500	124.6	0.4	160
VAR10D821K*Q	510	670	820 (738~902)	1355	25	3500	2500	124.6	0.4	140
VAR10D911K*Q	550	745	910 (819~1001)	1500	25	3500	2500	133	0.4	120
VAR10D102K*Q	625	825	1000 (900~1100)	1650	25	3500	2500	133	0.4	110
VAR10D112K*Q	680	895	1100 (990~1210)	1815	25	3500	2500	155	0.4	90

## VAR Series Zinc Oxide Varistor (6KV/3KA Series)

### SPECIFICATION (for 6KV/3KA Series)

#### 14D 6KV/3KA series

P/N	Maximum allowable Voltage		Varistor voltage $V_{1.0mA}$ (V)	Clamping voltage (Max.)		Maximum Peak Current (8/20 $\mu$ s)		Maximum (10/1000 (J)	Rated Power (W)	Typical Capacitance (1KHz (PF)
	AC rms (V)	DC rms (V)		VC (V)	IP (A)	1time (A)	2time (A)			
VAR14D820K*Q	50	65	82 (74~90)	135	50	6000	4500	29.4	0.6	3700
VAR14D101K*Q	60	85	100 (90~110)	165	50	6000	4500	33.6	0.6	3200
VAR14D121K*Q	75	100	120 (108~132)	200	50	6000	4500	40.6	0.6	2700
VAR14D181K*Q	115	150	180 (162~198)	300	50	6000	4500	58.8	0.6	1100
VAR14D201K*Q	130	170	200 (180~220)	340	50	6000	4500	79.8	0.6	770
VAR14D221K*Q	140	180	220 (198~242)	360	50	6000	4500	79.8	0.6	740
VAR14D241K*Q	150	200	240 (216~264)	395	50	6000	4500	82.6	0.6	700
VAR14D271K*Q	175	225	270 (243~297)	455	50	6000	4500	93.8	0.6	640
VAR14D301K*Q	190	250	300 (270~330)	500	50	6000	4500	103.6	0.6	670
VAR14D331K*Q	210	275	330 (297~363)	550	50	6000	4500	112	0.6	580
VAR14D361K*Q	230	300	360 (324~396)	595	50	6000	4500	123.2	0.6	540
VAR14D391K*Q	250	320	390 (351~429)	650	50	6000	4500	134.4	0.6	500
VAR14D431K*Q	275	350	430 (387~473)	710	50	6000	4500	145.6	0.6	450
VAR14D471K*Q	300	385	470 (423~517)	775	50	6000	4500	149.8	0.6	400

#### 14D 6KV/3KA series

P/N	Maximum allowable Voltage		Varistor voltage $V_{1.0mA}$ (V)	Clamping voltage (Max.)		Maximum Peak Current (8/20 $\mu$ s)		Maximum (10/1000 $\mu$ (J)	Rated Power (W)	Typical Capacitance (1KHz (PF)
	AC rms (V)	DC rms (V)		VC (V)	IP (A)	1time (A)	2time (A)			
VAR14D511K*Q	320	415	510 (459~61)	845	50	6000	4500	149.8	0.6	350
VAR14D561K*Q	350	460	560 (504~616)	925	50	6000	4500	149.8	0.6	360
VAR14D621K*Q	385	505	620 (558~682)	1025	50	6000	4500	168	0.6	330
VAR14D681K*Q	420	560	680 (612~748)	1120	50	6000	4500	168	0.6	320
VAR14D751K*Q	460	615	750 (675~825)	1240	50	6000	4500	203	0.6	310
VAR14D781K*Q	485	640	780 (702~858)	1290	50	6000	4500	203	0.6	260
VAR14D821K*Q	510	670	820 (738~902)	1355	50	6000	4500	203	0.6	280
VAR14D911K*Q	550	745	910 (819~1001)	1500	50	6000	4500	217	0.6	250
VAR14D102K*Q	625	825	1000 (900~1100)	1650	50	6000	4500	217	0.6	230
VAR14D112K*Q	680	895	1100 (990~1210)	1815	50	6000	4500	310	0.6	180
VAR14D182K*Q	1100	1465	1800 (1620~1980)	2970	50	6000	4500	335	0.6	130

## VAR Series Zinc Oxide Varistor (6KV/3KA Series)

### SPECIFICATION (for 6KV/3KA Series )

#### 20D 6KV/3KA series

P/N	Maximum allowable Voltage		Varistor voltage V <sub>1.0mA</sub> (V)	Clamping voltage (Max.)		Maximum Peak Current (8/20μs)		Maximum (10/1000μ) (J)	Rated Power (W)	Typical Capacitance 1KHz (PF)
	AC rms (V)	DC rms (V)		VC (V)	IP (A)	1time (A)	2time (A)			
VAR20D820K*Q	50	65	82 (74~90)	135	100	10000	6500	37.8	1	7500
VAR20D101K*Q	60	85	100 (90~110)	165	100	10000	6500	42	1	6500
VAR20D121K*Q	75	100	120 (108~132)	200	100	10000	6500	56	1	5500
VAR20D151K*Q	95	125	150 (135~165)	250	100	10000	6500	70	1	4500
VAR20D181K*Q	115	150	180 (162~198)	300	100	10000	6500	84	1	2200
VAR20D201K*Q	130	170	200 (180~220)	340	100	10000	6500	98	1	1700
VAR20D221K*Q	140	180	220 (198~242)	360	100	10000	6500	105	1	1600
VAR20D241K*Q	150	200	240 (216~264)	395	100	10000	6500	112	1	1500
VAR20D271K*Q	175	225	270 (243~297)	455	100	10000	6500	126	1	1300
VAR20D301K*Q	190	250	300 (270~330)	500	100	10000	6500	133	1	1300
VAR20D331K*Q	210	275	330 (297~363)	550	100	10000	6500	140	1	1100
VAR20D361K*Q	230	300	360 (324~396)	595	100	10000	6500	168	1	1100
VAR20D391K*Q	250	320	390 (351~429)	650	100	10000	6500	182	1	1100
VAR20D431K*Q	275	350	430 (387~473)	710	100	10000	6500	196	1	1000
VAR20D471K*Q	300	385	470 (423~517)	775	100	10000	6500	210	1	900

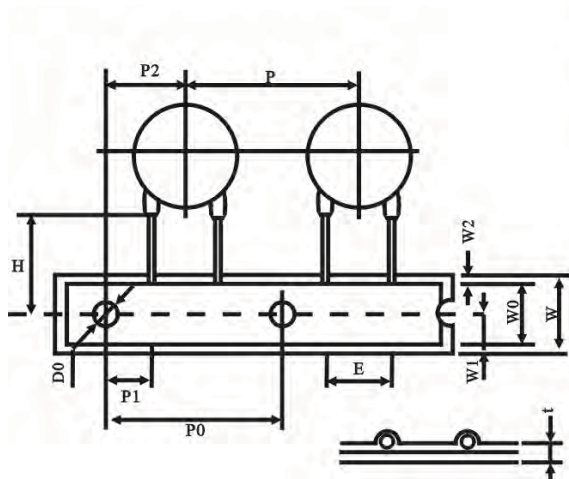
#### 20D 6KV/3KA series

P/N	Maximum allowable Voltage		Varistor voltage V <sub>1.0mA</sub> (V)	Clamping voltage (Max.)		Maximum Peak Current (8/20μs)		Maximum (10/1000) (J)	Rated Power (W)	Typical Capacitance 1KHz (PF)
	AC rms (V)	DC rms (V)		VC (V)	IP (A)	1time (A)	2time (A)			
VAR20D511K*Q	320	415	510 (459~61)	845	100	10000	6500	210	1	800
VAR20D561K*Q	350	460	560 (504~616)	925	100	10000	6500	210	1	710
VAR20D621K*Q	385	505	620 (558~682)	1025	100	10000	6500	224	1	700
VAR20D681K*Q	420	560	680 (612~748)	1120	100	10000	6500	224	1	650
VAR20D751K*Q	460	615	750 (675~825)	1240	100	10000	6500	266	1	600
VAR20D781K*Q	485	640	780 (702~858)	1290	100	10000	6500	440	1	510
VAR20D821K*Q	510	670	820 (738~902)	1355	100	10000	6500	266	1	530
VAR20D911K*Q	550	745	910 (819~1001)	1500	100	10000	6500	280	1	500
VAR20D102K*Q	625	825	1000 (900~1100)	1650	100	10000	6500	280	1	450
VAR20D112K*Q	680	895	1100 (990~1210)	1815	100	10000	6500	620	1	360
VAR20D182K*Q	1100	1465	1800 (1620~1980)	2970	100	10000	6500	990	1	320

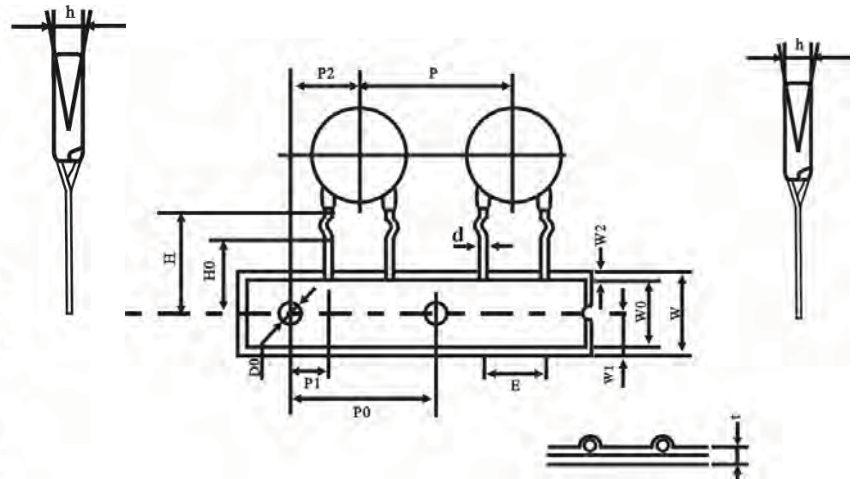
## VAR Series Zinc Oxide Varistor (6KV/3KA Series)

### TAPING SPECIFICATION

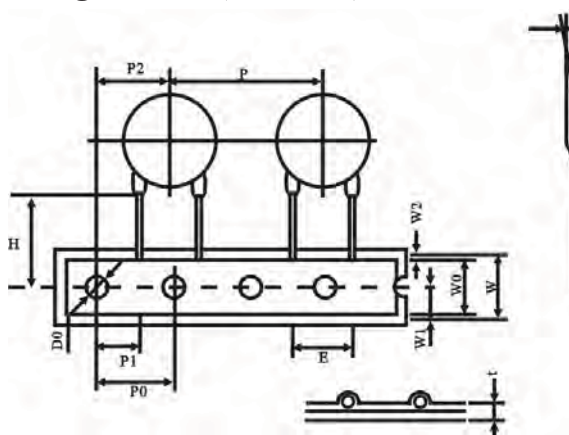
#### Straight Leads (05D, 07D)



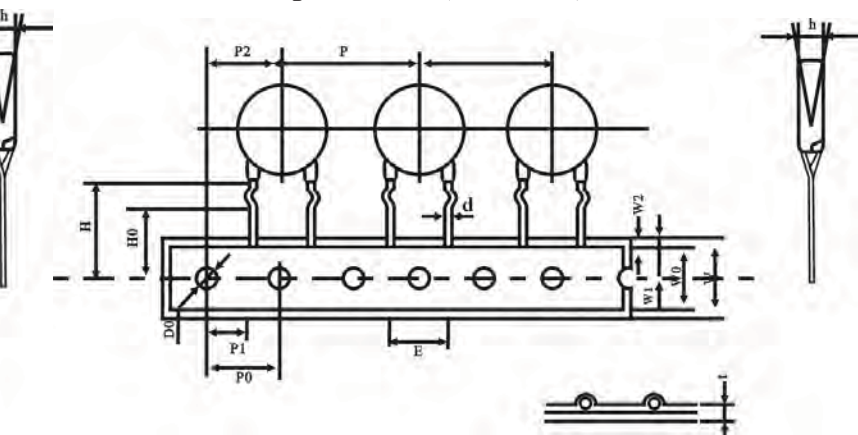
#### Crimped Leads (05D, 07D)



#### Straight Leads (10D, 14D)



#### Crimped Leads (10D, 14D)





## VAR Series Zinc Oxide Varistor (6KV/3KA Series)

### TAPING SPECIFICATION

Symbol	Parameter	05D	07D	10D	14D
<b>P</b>	Pitch Component	12.7±1.0	12.7±1.0	25.4±1.0	25.4±1.0
<b>P0</b>	Feed Hold	12.7±0.3	12.7±0.3	12.7±1.0	12.7±1.0
<b>P1</b>	Feed Hold Center to Lead	3.85±0.7	3.85±0.7	8.95±1.5	8.95±1.5
<b>P2</b>	Hold Center to Component Center	6.35±1.3	6.35±1.3	12.7±1.5	12.7±1.5
<b>E</b>	Lead to Lead Distance	5.0±0.8	5.0±0.8	7.5±0.8	7.5±0.8
<b>W</b>	Tape Width	18.0+1.5/-1.0	18.0+1.5/-1.0	18.0+1.0/-0.5	18.0+1.0/-0.5
<b>W0</b>	Hold Down Tape Width	10±0.5	10±0.5	10±0.5	10±0.5
<b>W1</b>	Hold Position	9.0+0.75/-0.5	9.0+0.75/-0.5	9.0±0.75	9.0±0.75
<b>W2</b>	Hold Down Tape Position	3.0max	3.0max	3.0max	3.0max
<b>H</b>	Height from Tape Center to Component	20.0±2.0	20.0±2.0	20.0±2.0	20.0±2.0
<b>H0</b>	Height from Tape Center to Component	16.0±1.0	16.0±1.0	16.0±1.0	16.0±1.0
<b>t</b>	Total Tape Thickness	0.6±0.3	0.6±0.3	0.6±0.3	0.6±0.3
<b>Δh</b>	Component Alignment	0±2.0	0±2.0	0±2.0	0±4.0
<b>D0</b>	Feed Hold Diameter	4.0±0.2	4.0±0.2	4.0±0.2	4.0±0.2
Unit : mm					

### Bulk Package SPQ:

Diameter Code:	Quantity per bag
VAR-05D, VAR-07D	1000 pcs
VAR-10D	500pcs
VAR-14D, 20D	250pcs