

# JNR VARISTOR

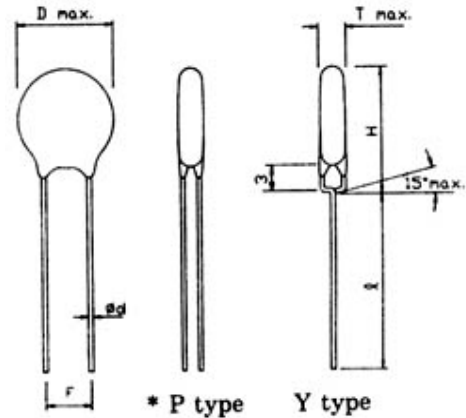
## METAL OXIDE VARISTOR

### PART DIMENSIONS - DIMENSION OF COMPONENT

#### Dimension Table

measure:m/m

Dia Code	5 $\phi$	7 $\phi$	10 $\phi$	14 $\phi$	20 $\phi$
D max.	7.5	9	13.5	17	23
d( $\pm 0.02$ )	0.6	0.6	0.8	0.8	1
F( $\pm 1.0$ )	5	5	7.5	7.5	10
H max.	11	12	15.5	20.5	28
L min.	25	25	25	25	25



Temperature range:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Storage temperature:  $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

Temperature coefficient of voltage:  $-0.05\% / ^{\circ}\text{C}$

#### OPTION:

- P type lead wire is the standard products.
- If you have other requirement, please contact us.

#### T max. Table

Dia Voltage	5 $\phi$	7 $\phi$	10 $\phi$	14 $\phi$	20 $\phi$	Dia Voltage	5 $\phi$	7 $\phi$	10 $\phi$	14 $\phi$	20 $\phi$
180K	4	4	4	4	4	301K	6	6	6	6	6
220K	5	5	5	5	5	331K	6	6	6	6	6
270K	5	5	5	5	5	361K	6	6	6	6	6
330K	5	5	5	5	5	391K	6	6	6	6	6
390K	5	5	5	5	5	431K	6	6	6	6	6
470K	5	5	5	5	5	471K	6	6	6	6	6
560K	5	5	5	5	5	511K	6	6	6	6	6
680K	5	5	5	5	5	561K	6	6	6	6	6
820K	5	5	5	5	5	621K			6	6	6
101K	5	5	5	5	5	681K			7	7	7
121K	5	5	5	5	5	751K			7	7	7
151K	5	5	5	5	5	781K			7	7	7
181K	5	5	5	5	5	821K			7	7	7
201K	5	5	5	5	5	911K			7	7	7
221K	5	5	5	5	5	102K			8	8	8
241K	5	5	5	5	5	112K			8	8	8
271K	5	5	5	5	5	182K			10	10	10

# METAL OXIDE VARISTOR SPECIFICATION - 5 $\phi$ JNR VARISTOR



Spec. Part No.	Varistor Voltage V <sub>0.1mA</sub> (V)		Maximum allowable Voltage		Maximum Clamping Voltage V <sub>5A</sub> (V)max	Withstanding Surge Current (8/20 $\mu$ s)		Rated Wattage (W)	Energy 10/100 $\mu$ s (J)	Typical Capacitance 1KHz (PF)	UL	CSA
			ACrms (V)	DC (V)		1 Time (A)	2 Time (A)					
JNR-5D180K	18	(16-20)	11	14	40	100	50	0.01	0.6	2,400		
JNR-5D220K	22	(20-24)	14	18	48	100	50	0.01	0.7	1,800	★	
JNR-5D270K	27	(24-30)	17	22	60	100	50	0.01	0.9	1,500	★	
JNR-5D330K	33	(30-36)	20	26	73	100	50	0.01	1.1	1,200	★	
JNR-5D390K	39	(35-43)	25	31	86	100	50	0.01	1.2	1,000	★	
JNR-5D470K	47	(42-52)	30	38	104	100	50	0.01	1.5	850	★	
JNR-5D560K	56	(50-62)	35	45	123	100	50	0.01	1.8	700	★	
JNR-5D680K	68	(61-75)	40	56	150	100	50	0.01	2.1	560	★	
JNR-5D820K	82	(74-90)	50	65	145	400	200	0.1	2.8	480	★	
JNR-5D101K	100	(90-110)	60	85	175	400	200	0.1	3.5	420	★	
JNR-5D121K	120	(108-132)	75	100	210	400	200	0.1	4	360	★	
JNR-5D151K	150	(135-165)	95	125	260	400	200	0.1	5.5	280	★	
JNR-5D181K	180	(162-198)	115	150	320	400	200	0.1	6.5	200	★	
JNR-5D201K	200	(185-225)	130	170	355	400	200	0.1	7.1	160	★	★
JNR-5D221K	220	(198-242)	140	180	380	400	200	0.1	7.8	100	★	★
JNR-5D241K	240	216-264)	150	200	415	400	200	0.1	8.4	80	★	★
JNR-5D271K	270	247-303)	175	225	475	400	200	0.1	9.9	75	★	★
JNR-5D301K	300	(270-330)	195	250	525	400	200	0.1	10.5	66	★	★
JNR-5D331K	330	(297-363)	210	275	575	400	200	0.1	11.5	60	★	★
JNR-5D361K	360	(324-396)	230	300	620	400	200	0.1	13	55	★	★
JNR-5D391K	390	(351-429)	250	320	675	400	200	0.1	15	53	★	★
JNR-5D431K	430	(387-473)	275	350	745	400	200	0.1	16.5	50	★	★
JNR-5D471K	470	(423-517)	300	385	810	400	200	0.1	17.5	45	★	★
JNR-5D511K	510	(459-561)	320	418	842	400	200	0.1	19	42	★	★
JNR-5D561K	560	(504-616)	350	460	920	400	200	0.1	20	40	★	★

The clamping voltage from 180K to 680K is tested with current 1A



# METAL OXIDE VARISTOR

## SPECIFICATION - 7ø JNR VARISTOR

Spec. Part No.	Varistor Voltage V <sub>0.1mA</sub> (V)		Maximum allowable Voltage		Maximum Clamping Voltage V <sub>5A</sub> (V)max	Withstanding Surge Current (8/20us)		Rated Wattag (W)	Energy 10/100us (J)	Typical Capacitance 1KHz (PF)	UL	CSA
			ACrms (V)	DC (V)		1 Time (A)	2 Time (A)					
JNR-7D180K	18	(16-20)	11	14	38	250	125	0.02	1.2	3,500		
JNR-7D220K	22	(20-24)	14	18	43	250	125	0.02	1.4	2,800	★	
JNR-7D270K	27	(24-30)	17	22	53	250	125	0.02	1.7	2,200	★	
JNR-7D330K	33	(30-36)	20	26	65	250	125	0.02	2.2	1,800	★	
JNR-7D390K	39	(35-43)	25	31	77	250	125	0.02	2.4	1,450	★	
JNR-7D470K	47	(42-52)	30	38	93	250	125	0.02	3	1,150	★	
JNR-7D560K	56	(50-62)	35	45	110	250	125	0.02	3.5	1,050	★	
JNR-7D680K	68	(61-75)	40	56	135	250	125	0.02	4.3	970	★	
JNR-7D820K	82	(74-90)	50	65	135	1200	600	0.25	5.5	930	★	
JNR-7D101K	100	(90-110)	60	85	165	1200	600	0.25	7	860	★	
JNR-7D121K	120	(108-132)	75	100	200	1200	600	0.25	8	670	★	
JNR-7D151K	150	(135-165)	95	125	250	1200	600	0.25	11	490	★	
JNR-7D181K	180	(162-198)	115	150	300	1200	600	0.25	13	330	★	
JNR-7D201K	200	(185-225)	130	170	340	1200	600	0.25	14.3	240	★	★
JNR-7D221K	220	(198-242)	140	180	360	1200	600	0.25	15.5	190	★	★
JNR-7D241K	240	(216-264)	150	200	395	1200	600	0.25	16.8	165	★	★
JNR-7D271K	270	(247-303)	175	225	455	1200	600	0.25	19.8	150	★	★
JNR-7D301K	300	(270-330)	195	250	505	1200	600	0.25	21	135	★	★
JNR-7D331K	330	(297-363)	210	275	550	1200	600	0.25	23	130	★	★
JNR-7D361K	360	(324-396)	230	300	595	1200	600	0.25	26	125	★	★
JNR-7D391K	390	(351-429)	250	320	650	1200	600	0.25	30	105	★	★
JNR-7D431K	430	(387-473)	275	350	710	1200	600	0.25	33	100	★	★
JNR-7D471K	470	(423-517)	300	385	775	1200	600	0.25	35	90	★	★
JNR-7D511K	510	(459-561)	320	418	842	1200	600	0.25	37	80	★	★
JNR-7D561K	560	(504-616)	350	460	920	1200	600	0.25	39	75	★	★

The clamping voltage from 180K to 680K is tested with current 2.5A

# METAL OXIDE VARISTOR



## SPECIFICATION - 10ø JNR VARISTOR

Spec. Part No.	Varistor Voltage V <sub>0.1mA</sub>		Maximum allowable Voltage		Maximum Clamping Voltage V <sub>5A</sub> (V)max	Withstanding Surge Current (8/20us)		Rated Wattage (W)	Energy 10/100us (J)	Typical Capacitance 1KHz (PF)	UL	CSA
	(V)	(V)	ACrms (V)	DC (V)		1 Time (A)	2 Time (A)					
JNR-10D180K	18	(16-20)	11	14	38	500	250	0.05	2.4	7,500		
JNR-10D220K	22	(20-24)	14	18	43	500	250	0.05	2.7	6,000	★	
JNR-10D270K	27	(24-30)	17	22	53	500	250	0.05	3.5	4,800	★	
JNR-10D330K	33	(30-36)	20	26	65	500	250	0.05	4.4	4,200	★	
JNR-10D390K	39	(35-43)	25	31	77	500	250	0.05	4.7	3,700	★	
JNR-10D470K	47	(42-52)	30	38	93	500	250	0.05	6	3,300	★	
JNR-10D560K	56	(50-62)	35	45	110	500	250	0.05	7	2,900	★	
JNR-10D680K	68	(61-75)	40	56	135	500	250	0.05	8.5	2,500	★	
JNR-10D820K	82	(74-90)	50	65	135	2500	1250	0.4	11	2,100	★	
JNR-10D101K	100	(90-110)	60	85	165	2500	1250	0.4	14	1,700	★	
JNR-10D121K	120	(108-132)	75	100	200	2500	1250	0.4	16	1,500	★	
JNR-10D151K	150	(135-165)	95	125	250	2500	1250	0.4	22	1,300	★	
JNR-10D181K	180	(162-198)	115	150	300	2500	1250	0.4	26	470	★	
JNR-10D201K	200	(185-225)	130	170	340	2500	1250	0.4	28.5	430	★	★
JNR-10D221K	220	(198-242)	140	180	360	2500	1250	0.4	31	390	★	★
JNR-10D241K	240	(216-264)	150	200	395	2500	1250	0.4	33.5	360	★	★
JNR-10D271K	270	(247-303)	175	225	455	2500	1250	0.4	39.5	330	★	★
JNR-10D301K	300	(270-330)	195	250	505	2500	1250	0.4	42	290	★	★
JNR-10D331K	330	(297-363)	210	275	550	2500	1250	0.4	46	280	★	★
JNR-10D361K	360	(324-396)	230	300	595	2500	1250	0.4	52	260	★	★
JNR-10D391K	390	(351-429)	250	320	650	2500	1250	0.4	60	240	★	★
JNR-10D431K	430	(387-473)	275	350	710	2500	1250	0.4	66	220	★	★
JNR-10D471K	470	(423-517)	300	385	775	2500	1250	0.4	70	190	★	★
JNR-10D511K	510	(459-561)	320	418	842	2500	1250	0.4	74	180	★	★
JNR-10D561K	560	(504-616)	350	460	920	2500	1250	0.4	78	180	★	★
JNR-10D621K	620	(558-682)	385	505	1,025	2500	1250	0.4	82	160	★	★
JNR-10D681K	680	(612-748)	420	560	1,120	2500	1250	0.4	86	140	★	★
JNR-10D751K	750	(675-825)	460	615	1,240	2500	1250	0.4	90	130	★	★
JNR-10D781K	780	(702-858)	485	640	1,290	2500	1250	0.4	92	130	★	★
JNR-10D821K	820	(728-902)	510	670	1,355	2500	1250	0.4	94	130	★	★
JNR-10D911K	910	(819-1001)	550	745	1,500	2500	1250	0.4	102	120	★	★
JNR-10D102K	1000	(900-1100)	625	825	1,650	2500	1250	0.4	112	100	★	★
JNR-10D112K	1100	(990-1210)	680	895	1,815	2500	1250	0.4	124	90	★	★

The clamping voltage from 180K to 680K is tested with current 5A



# METAL OXIDE VARISTOR

## SPECIFICATION - 14ø JNR VARISTOR

Spec. Part No.	Varistor Voltage V <sub>0.1mA</sub>		Maximum allowable Voltage		Maximum Clamping Voltage V <sub>5A</sub> (V)max	Withstanding Surge Current (8/20us)		Rated Wattage (W)	Energy 10/100us (J)	Typical Capacitance 1KHz (PF)	UL	CSA
	(V)	(V)	ACrms (V)	DC (V)		1 Time (A)	2 Time (A)					
	JNR-14D180K	18	(16-20)	11	14	38	1000	500	0.1	4.7	18,000	
JNR-14D220K	22	(20-24)	14	18	43	1000	500	0.1	5.4	15,000	★	
JNR-14D270K	27	(24-30)	17	22	53	1000	500	0.1	6.9	10,000	★	
JNR-14D330K	33	(30-36)	20	26	65	1000	500	0.1	8.8	8,500	★	
JNR-14D390K	39	(35-43)	25	31	77	1000	500	0.1	9.4	7,500	★	
JNR-14D470K	47	(42-52)	30	38	93	1000	500	0.1	12	6,500	★	
JNR-14D560K	56	(50-62)	35	45	110	1000	500	0.1	14	5,600	★	
JNR-14D680K	68	(61-75)	40	56	135	1000	500	0.1	17	4,700	★	
JNR-14D820K	82	(74-90)	50	65	135	4500	2500	0.6	22	3,900	★	
JNR-14D101K	100	(90-110)	60	85	165	4500	2500	0.6	28	3,400	★	
JNR-14D121K	120	(108-132)	75	100	200	4500	2500	0.6	32	3,100	★	
JNR-14D151K	150	(135-165)	95	125	250	4500	2500	0.6	44	3,000	★	
JNR-14D181K	180	(162-198)	115	150	300	4500	2500	0.6	52	1,030	★	
JNR-14D201K	200	(195-225)	130	170	340	4500	2500	0.6	57	970	★	★
JNR-14D221K	220	(198-242)	140	180	360	4500	2500	0.6	62	840	★	★
JNR-14D241K	240	(216-264)	150	200	395	4500	2500	0.6	67	710	★	★
JNR-14D271K	270	(247-303)	175	225	455	4500	2500	0.6	79	650	★	★
JNR-14D301K	300	(270-330)	195	250	505	4500	2500	0.6	84	600	★	★
JNR-14D331K	330	(297-363)	210	275	550	4500	2500	0.6	92	550	★	★
JNR-14D361K	360	(324-396)	230	300	595	4500	2500	0.6	104	500	★	★
JNR-14D391K	390	(351-429)	250	320	650	4500	2500	0.6	120	480	★	★
JNR-14D431K	430	(387-473)	275	350	710	4500	2500	0.6	132	440	★	★
JNR-14D471K	470	(423-517)	300	385	775	4500	2500	0.6	140	420	★	★
JNR-14D511K	510	(459-561)	320	418	842	4500	2500	0.6	148	390	★	★
JNR-14D561K	560	(504-616)	350	460	920	4500	2500	0.6	156	360	★	★
JNR-14D621K	620	(558-682)	385	505	1,025	4500	2500	0.6	164	320	★	★
JNR-14D681K	680	(612-748)	420	560	1,120	4500	2500	0.6	172	290	★	★
JNR-14D751K	750	(685-825)	460	615	1,240	4500	2500	0.6	180	260	★	★
JNR-14D781K	780	(702-858)	485	640	1,290	4500	2500	0.6	184	230	★	★
JNR-14D821K	820	(738-902)	510	670	1,355	4500	2500	0.6	188	230	★	★
JNR-14D911K	910	(819-1001)	550	745	1,500	4500	2500	0.6	204	200	★	★
JNR-14D102K	1000	(900-1100)	625	825	1,650	4500	2500	0.6	224	180	★	★
JNR-14D112K	1100	(990-1210)	680	895	1,850	4500	2500	0.6	248	150	★	★
JNR-14K182K	1800	(1620-1980)	1000	1465	2,970	4500	2500	0.6	342	120	★	★

The clamping voltage from 180K to 680K is tested with current 10A

# METAL OXIDE VARISTOR SPECIFICATION - 20ø JNR VARISTOR



Spec.  Part No.	Varistor Voltage V <sub>0.1mA</sub>		Maximum allowable Voltage		Maximum Clamping Voltage	Withstanding Surge Current (8/20us)		Rated Wattage (W)	Energy 10/100us (J)	Typical Capacitance 1KHz (PF)	UL	CSA
	(V)	(16-20)	ACrms (V)	DC (V)	V <sub>5A</sub> (V)max	1 Time (A)	2 Time (A)					
JNR-20D180K	18	(16-20)	11	14	38	2,000	1,000	0.2	9.4	39,000		
JNR-20D220K	22	(20-24)	11	18	43	2,000	1,000	0.2	10.8	32,000	★	
JNR-20D270K	27	(24-30)	17	22	53	2,000	1,000	0.2	13.8	22,000	★	
JNR-20D330K	33	(30-36)	20	26	65	2,000	1,000	0.2	17.5	18,000	★	
JNR-20D390K	39	(35-43)	25	31	77	2,000	1,000	0.2	18.6	16,000	★	
JNR-20D470K	47	(42-52)	30	38	93	2,000	1,000	0.2	23.5	14,000	★	
JNR-20D560K	56	(50-62)	35	45	110	2,000	1,000	0.2	27	12,000	★	
JNR-20D680K	68	(61-75)	40	56	135	2,000	1,000	0.2	43.2	10,000	★	
JNR-20D820K	82	(74-90)	50	65	135	6,500	4,000	1	44	5,800	★	
JNR-20D101K	100	(90-110)	60	85	165	6,500	4,000	1	56	4,800	★	
JNR-20D121K	120	(108-132)	75	100	200	6,500	4,000	1	64	3,800	★	
JNR-20D151K	150	(135-165)	95	125	250	6,500	4,000	1	88	3,000	★	
JNR-20D181K	180	(162-198)	115	150	300	6,500	4,000	1	104	2,600	★	
JNR-20D201K	200	(185-225)	130	170	340	6,500	4,000	1	114	2,400	★	★
JNR-20D221K	220	(198-242)	140	180	360	6,500	4,000	1	124	1,800	★	★
JNR-20D241K	240	(216-264)	150	200	395	6,500	4,000	1	134	1,500	★	★
JNR-20D271K	270	(247-303)	175	225	455	6,500	4,000	1	155	1,400	★	★
JNR-20D301K	300	(270-330)	195	250	505	6,500	4,000	1	168	1,350	★	★
JNR-20D331K	330	(297-363)	210	275	550	6,500	4,000	1	184	1,300	★	★
JNR-20D361K	360	(324-396)	230	300	595	6,500	4,000	1	208	1,250	★	★
JNR-20D391K	390	(351-429)	250	320	650	6,500	4,000	1	240	1,180	★	★
JNR-20D431K	430	(387-473)	275	350	710	6,500	4,000	1	364	1,100	★	★
JNR-20D471K	470	(423-517)	300	385	775	6,500	4,000	1	280	1,050	★	★
JNR-20D511K	510	(459-561)	320	418	842	6,500	4,000	1	296	1,000	★	★
JNR-20D561K	560	(504-616)	350	460	920	6,500	4,000	1	312	970	★	★
JNR-20D621K	620	(558-682)	385	505	1,025	6,500	4,000	1	328	950	★	★
JNR-20D681K	680	(612-748)	420	560	1,120	6,500	4,000	1	344	900	★	★
JNR-20D751K	750	(675-825)	460	615	1,240	6,500	4,000	1	360	850	★	★
JNR-20D781K	780	(702-858)	485	640	1,290	6,500	4,000	1	368	750	★	★
JNR-20D821K	820	(738-902)	510	670	1,355	6,500	4,000	1	376	700	★	★
JNR-20D911K	910	(819-1001)	550	745	1,500	6,500	4,000	1	408	600	★	★
JNR-20D102K	1000	(900-1100)	625	825	1,650	6,500	4,000	1	448	500	★	★
JNR-20D112K	1100	(990-1210)	680	895	1,815	6,500	4,000	1	496	450	★	★
JNR-20D182K	1800	(1620-1980)	1,000	1,465	2,970	6,500	4,000	1	682	220	★	★

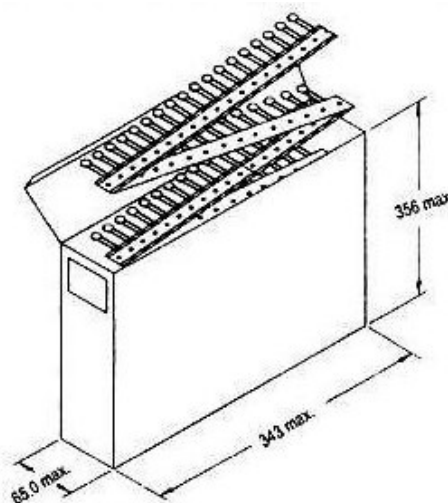
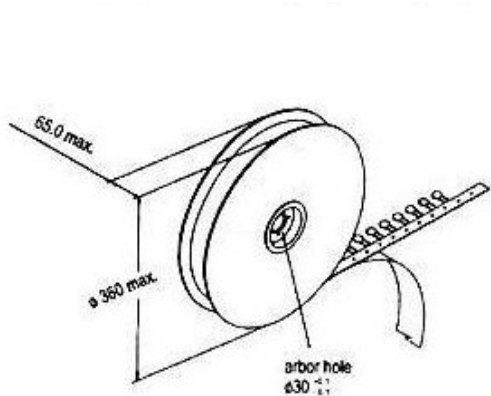
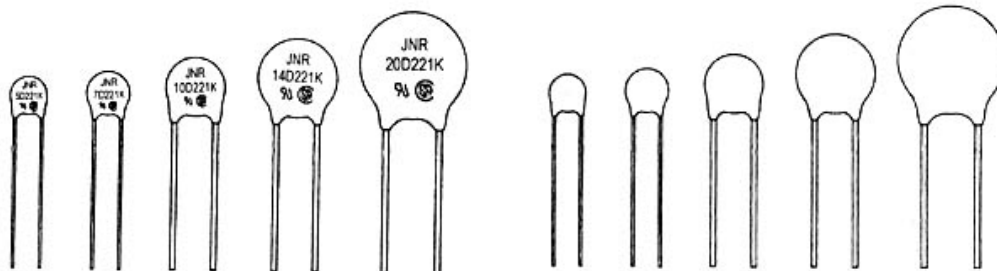
The clamping voltage from 180K to 680K is tested with current 25A

# JNR VARISTOR



## METAL OXIDE VARISTOR

## MARKING AND PACKING

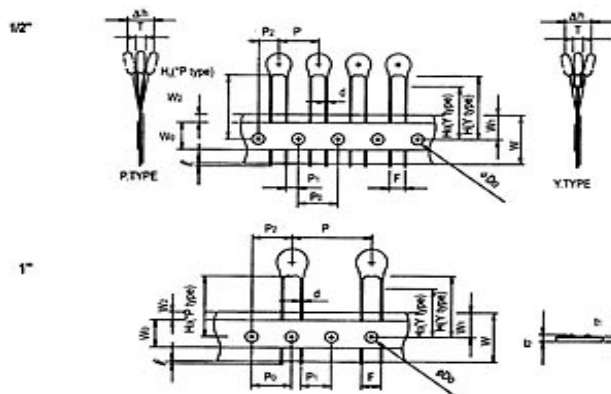


### Quantity per Package Unit

Series	Bulk	Reel/Ammo
5	200	1000
7	200	1000
10	200	1000
14	200	1000
20	200	inquiry



## METAL OXIDE VARISTOR DIMENSION OF TAPING PRODUCT



Sb	Item	5 $\phi$ 7 $\phi$ 10 $\phi$	14 $\phi$ 20 $\phi$
I	Cut out length	1.1mm max.	1.1mm max.
H(Y type)	Height of component	20.0mm max.	21.5mm max.
H0(Y type)	Height to seating plane	16.0 $\pm$ 0.5mm	16.0 $\pm$ 0.5mm
H0(P type)	height of component from hole center	16.0mm~21.0mm	16.0mm~21.0mm
h	Front to back deviation	0 $\pm$ 2.0mm	0 $\pm$ 2.0mm
W	Carrier tape width	18 +1/-0.5 mm	18 +1/-0.5 mm
W0	Hole down tape width	6.0mm min	6.0mm min
W1	Sprocket hole position	9 +0.75/-0.5 mm	9 +0.0/-0.2 mm
W2	Adhesive tape position	3.0mm max.	3.0mm max.
F	Component lead spacing	5 +0.8/-0.2 mm	7.5 +0.0/-0.2 mm
P	Pitch of component	12.7 $\pm$ 0.3mm	25.4 $\pm$ 0.3mm
P0	Sprocket hole pitch	12.7 $\pm$ 0.3mm	12.7 $\pm$ 0.3mm
P1	Lead length from hole center to lead	3.85 $\pm$ 0.7mm	8.95 $\pm$ 0.7mm
P2	Length from hole center to disk center	6.38 $\pm$ 1.3mm	12.7 $\pm$ 1.3mm
D0	Sprocket hole diameter	4.0 $\pm$ 0.2mm	4.0 $\pm$ 0.2mm
d	Lead wire diameter	0.6 $\pm$ 0.05mm	0.8 $\pm$ 0.05mm
T	Disk thickness	See T max. Table	See T max. Table
t1	Total thickness	0.7 $\pm$ 0.2mm	0.7 $\pm$ 0.2mm
t2	Total thickness tape with tape	1.6mm max.	1.8mm max.