



# PRODUCT CHANGE NOTIFICATION

## VARISTORS



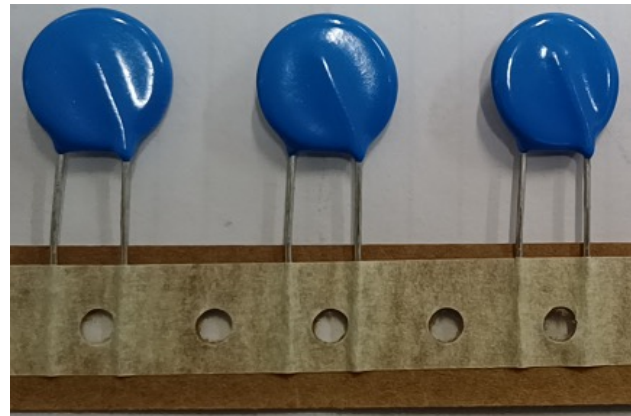
### Bourns® Model MOV-07D, MOV-10D, MOV-14D and MOV-20D Series Metal Oxide Varistors *Product Taping Method and Machinery Change*

Riverside, California – May 19, 2023 – Effective August 1, 2023, Bourns will begin using a new taping machine and product taping method to improve production efficiency for the [Model MOV-07D](#), [MOV-10D](#), [MOV-14D](#) and [MOV-20D](#) Series Metal Oxide Varistors. As shown below, the new taping machine and method will cover the lead terminals at the bottom of the tape. Specific information and figures are provided at the end of this Product Change Notification.

MOV-14D Tape Before Change



MOV-14D Tape After Change



These changes will not affect the form, fit, function, quality or reliability of the affected products. The product specifications will not change. There are no changes to the electrical characteristics of the products.

*If you have any questions or need additional information, please feel free to [contact Customer Service/Inside Sales](#).*

*Users should verify that the described changes will not impact the performance of the product in their specific applications.*

KV2305

A list of affected part numbers is provided below.

Affected Part Numbers							
MOV-07D		MOV-10D		MOV-14D		MOV-20D	
Straight Leads	Kinked Leads	Straight Leads	Kinked Leads	Straight Leads	Kinked Leads	Straight Leads	Kinked Leads
MOV-07D180K	MOV-07D180KK	MOV-10D180K	MOV-10D180KK	MOV-14D180K	MOV-14D180KK	MOV-20D180K	MOV-20D180KK
MOV-07D220K	MOV-07D220KK	MOV-10D220K	MOV-10D220KK	MOV-14D220K	MOV-14D220KK	MOV-20D220K	MOV-20D220KK
MOV-07D270K	MOV-07D270KK	MOV-10D270K	MOV-10D270KK	MOV-14D270K	MOV-14D270KK	MOV-20D270K	MOV-20D270KK
MOV-07D330K	MOV-07D330KK	MOV-10D330K	MOV-10D330KK	MOV-14D330K	MOV-14D330KK	MOV-20D330K	MOV-20D330KK
MOV-07D390K	MOV-07D390KK	MOV-10D390K	MOV-10D390KK	MOV-14D390K	MOV-14D390KK	MOV-20D390K	MOV-20D390KK
MOV-07D470K	MOV-07D470KK	MOV-10D470K	MOV-10D470KK	MOV-14D470K	MOV-14D470KK	MOV-20D470K	MOV-20D470KK
MOV-07D560K	MOV-07D560KK	MOV-10D560K	MOV-10D560KK	MOV-14D560K	MOV-14D560KK	MOV-20D560K	MOV-20D560KK
MOV-07D680K	MOV-07D680KK	MOV-10D680K	MOV-10D680KK	MOV-14D680K	MOV-14D680KK	MOV-20D680K	MOV-20D680KK
MOV-07D820K	MOV-07D820KK	MOV-10D820K	MOV-10D820KK	MOV-14D820K	MOV-14D820KK	MOV-20D820K	MOV-20D820KK
MOV-07D101K	MOV-07D101KK	MOV-10D101K	MOV-10D101KK	MOV-14D101K	MOV-14D101KK	MOV-20D101K	MOV-20D101KK
MOV-07D121K	MOV-07D121KK	MOV-10D121K	MOV-10D121KK	MOV-14D121K	MOV-14D121KK	MOV-20D121K	MOV-20D121KK
MOV-07D151K	MOV-07D151KK	MOV-10D151K	MOV-10D151KK	MOV-14D151K	MOV-14D151KK	MOV-20D151K	MOV-20D151KK
MOV-07D181K	MOV-07D181KK	MOV-10D181K	MOV-10D181KK	MOV-14D181K	MOV-14D181KK	MOV-20D181K	MOV-20D181KK
MOV-07D201K	MOV-07D201KK	MOV-10D201K	MOV-10D201KK	MOV-14D201K	MOV-14D201KK	MOV-20D201K	MOV-20D201KK
MOV-07D221K	MOV-07D221KK	MOV-10D221K	MOV-10D221KK	MOV-14D221K	MOV-14D221KK	MOV-20D221K	MOV-20D221KK
MOV-07D241K	MOV-07D241KK	MOV-10D241K	MOV-10D241KK	MOV-14D241K	MOV-14D241KK	MOV-20D241K	MOV-20D241KK
MOV-07D271K	MOV-07D271KK	MOV-10D271K	MOV-10D271KK	MOV-14D271K	MOV-14D271KK	MOV-20D271K	MOV-20D271KK
MOV-07D301K	MOV-07D301KK	MOV-10D301K	MOV-10D301KK	MOV-14D301K	MOV-14D301KK	MOV-20D301K	MOV-20D301KK
MOV-07D331K	MOV-07D331KK	MOV-10D331K	MOV-10D331KK	MOV-14D331K	MOV-14D331KK	MOV-20D331K	MOV-20D331KK
MOV-07D361K	MOV-07D361KK	MOV-10D361K	MOV-10D361KK	MOV-14D361K	MOV-14D361KK	MOV-20D361K	MOV-20D361KK
MOV-07D391K	MOV-07D391KK	MOV-10D391K	MOV-10D391KK	MOV-14D391K	MOV-14D391KK	MOV-20D391K	MOV-20D391KK
MOV-07D431K	MOV-07D431KK	MOV-10D431K	MOV-10D431KK	MOV-14D431K	MOV-14D431KK	MOV-20D431K	MOV-20D431KK
MOV-07D471K	MOV-07D471KK	MOV-10D471K	MOV-10D471KK	MOV-14D471K	MOV-14D471KK	MOV-20D471K	MOV-20D471KK
MOV-07D511K	MOV-07D511KK	MOV-10D511K	MOV-10D511KK	MOV-14D511K	MOV-14D511KK	MOV-20D511K	MOV-20D511KK
MOV-07D561K	MOV-07D561KK	MOV-10D561K	MOV-10D561KK	MOV-14D561K	MOV-14D561KK	MOV-20D561K	MOV-20D561KK
MOV-07D621K	MOV-07D621KK	MOV-10D621K	MOV-10D621KK	MOV-14D621K	MOV-14D621KK	MOV-20D621K	MOV-20D621KK
MOV-07D681K	MOV-07D681KK	MOV-10D681K	MOV-10D681KK	MOV-14D681K	MOV-14D681KK	MOV-20D681K	MOV-20D681KK
MOV-07D751K	MOV-07D751KK	MOV-10D751K	MOV-10D751KK	MOV-14D751K	MOV-14D751KK	MOV-20D751K	MOV-20D751KK
MOV-07D781K	MOV-07D781KK	MOV-10D781K	MOV-10D781KK	MOV-14D781K	MOV-14D781KK	MOV-20D781K	MOV-20D781KK
MOV-07D821K	MOV-07D821KK	MOV-10D821K	MOV-10D821KK	MOV-14D821K	MOV-14D821KK	MOV-20D821K	MOV-20D821KK

Samples of these varistors produced using the new taping method and machine are available upon request. Bourns recommends that customers test the affected part numbers in their specific applications for verification of satisfactory performance.

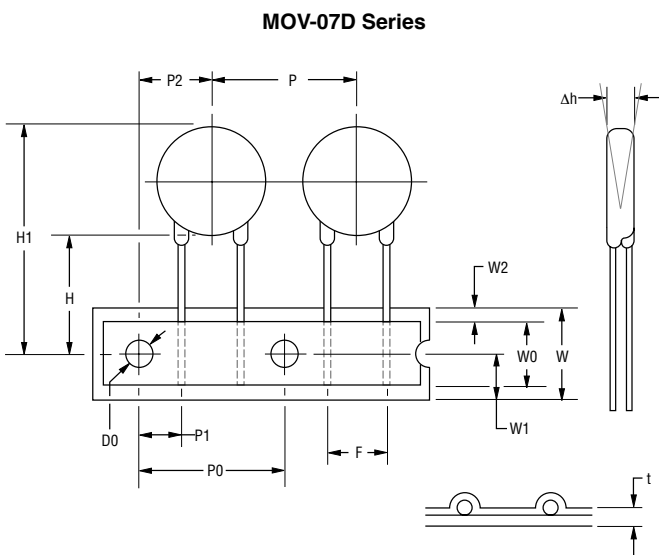
**Implementation dates are as follows:**

Date that varistors using existing taping method and machine will cease: **July 31, 2023**

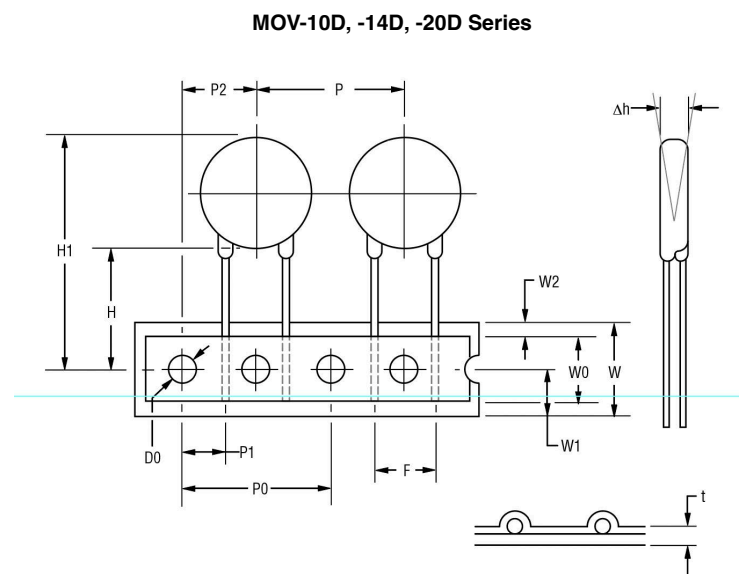
Date that varistors using updated taping method and machine will begin: **August 1, 2023**

First date code using the above changes: **2331**

**Figure 1 – New Tape & Reel Packaging Information for Straight Leads**

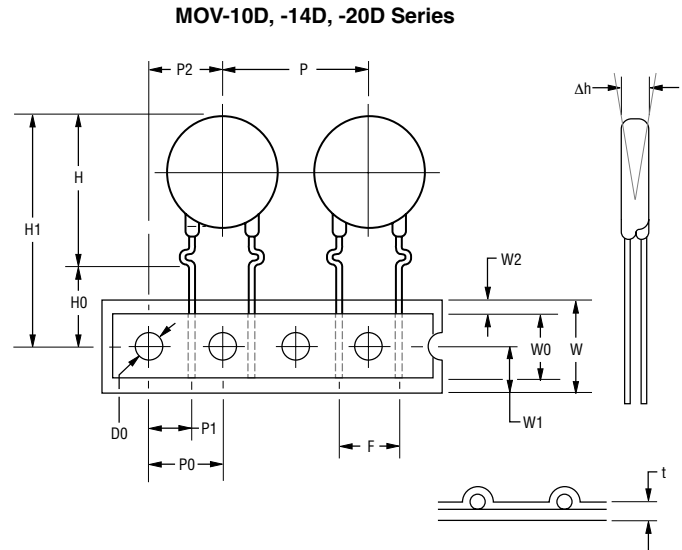
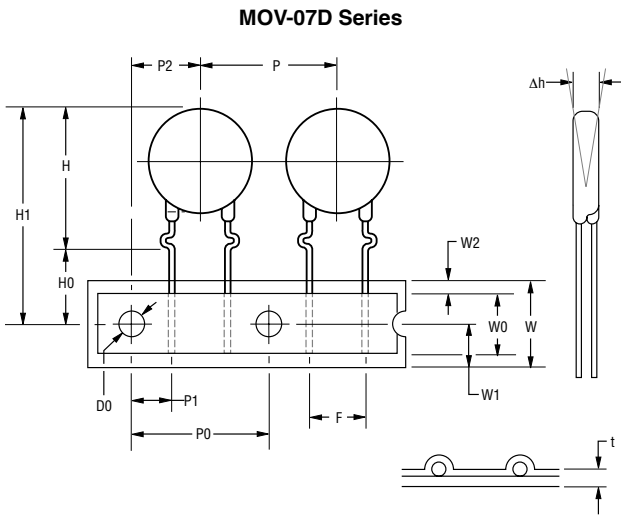


Item	Symbol	7 mm Disc
Pitch of Component	P	$\frac{12.7 \pm 1.0}{(0.50 \pm 0.04)}$
Feed Hole Pitch	P0	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$
Feed Hole Center to Pitch	P1	$\frac{3.85 \pm 0.7}{(0.15 \pm 0.03)}$
Feed Hole Center to Component Center	P2	$\frac{6.35 \pm 0.7}{(0.25 \pm 0.03)}$
Lead to Lead Distance	F	$\frac{5.00 \pm 0.8}{(0.20 \pm 0.03)}$
Component Alignment	$\Delta h$	$\frac{2.0}{(0.79)}$ max.
Tape Width	W	$\frac{18.0 \pm 0.5}{(0.71 \pm 0.02)}$
Hole Down Tape Width	W0	$\frac{12.0 \pm 0.8}{(0.47 \pm 0.03)}$
Hole Position	W1	$\frac{9.0 \pm 0.5}{(0.35 \pm 0.02)}$
Hole Down Tape Position	W2	$\frac{3.0}{(0.12)}$ max.
Height From Center to Component Base	H	$\frac{19.0 \pm 1.0}{(0.75 \pm 0.04)}$
Component Height	H1	$\frac{32.0}{(1.26)}$ max.
Feed Hole Diameter	D0	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$
Total Tape Thickness	t	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$



Item	Symbol	10 mm Disc	14 mm Disc	20 mm Disc
Pitch of Component	P	$\frac{25.4 \pm 1.0}{(1.00 \pm 0.04)}$	$\frac{25.4 \pm 1.0}{(1.00 \pm 0.04)}$	$\frac{25.4 \pm 1.0}{(1.00 \pm 0.04)}$
Feed Hole Pitch	P0	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$
Feed Hole Center to Pitch	P1	$\frac{8.95 \pm 0.7}{(0.352 \pm 0.03)}$	$\frac{8.95 \pm 0.7}{(0.352 \pm 0.03)}$	$\frac{7.77 \pm 0.7}{(0.31 \pm 0.03)}$
Feed Hole Center to Component Center	P2	$\frac{12.7 \pm 0.7}{(0.50 \pm 0.03)}$	$\frac{12.7 \pm 0.7}{(0.50 \pm 0.03)}$	$\frac{12.7 \pm 0.7}{(0.50 \pm 0.03)}$
Lead to Lead Distance	F	$\frac{7.50 \pm 0.8}{(0.30 \pm 0.03)}$	$\frac{7.50 \pm 0.8}{(0.30 \pm 0.03)}$	$\frac{10.0 \pm 0.8}{(0.39 \pm 0.03)}$
Component Alignment	$\Delta h$	$\frac{2.0}{(0.79)}$ max.	$\frac{4.0}{(0.16)}$ max.	$\frac{4.0}{(0.16)}$ max.
Tape Width	W	$\frac{18.0 \pm 0.5}{(0.71 \pm 0.02)}$	$\frac{18.0 \pm 0.5}{(0.71 \pm 0.02)}$	$\frac{18.0 \pm 0.5}{(0.71 \pm 0.02)}$
Hole Down Tape Width	W0	$\frac{12.0 \pm 0.8}{(0.47 \pm 0.03)}$	$\frac{12.0 \pm 0.8}{(0.47 \pm 0.03)}$	$\frac{12.0 \pm 0.8}{(0.47 \pm 0.03)}$
Hole Position	W1	$\frac{9.0 \pm 0.5}{(0.35 \pm 0.02)}$	$\frac{9.0 \pm 0.5}{(0.35 \pm 0.02)}$	$\frac{9.0 \pm 0.5}{(0.35 \pm 0.02)}$
Hole Down Tape Position	W2	$\frac{3.0}{(0.12)}$ max.	$\frac{3.0}{(0.12)}$ max.	$\frac{3.0}{(0.12)}$ max.
Height From Center to Component Base	H	$\frac{19.0 \pm 1.0}{(0.75 \pm 0.04)}$	$\frac{19.0 \pm 1.0}{(0.75 \pm 0.04)}$	$\frac{19.0 \pm 1.0}{(0.75 \pm 0.04)}$
Component Height	H1	$\frac{36.0}{(1.42)}$ max.	$\frac{40.0}{(1.57)}$ max.	$\frac{47.0}{(1.85)}$ max.
Feed Hole Diameter	D0	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$
Total Tape Thickness	t	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$

Figure 2 – New Tape & Reel Packaging Information for Kinked Leads



Item	Symbol	7 mm Disc
Pitch of Component	P	$\frac{12.7 \pm 1.0}{(0.50 \pm 0.04)}$
Feed Hole Pitch	P0	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$
Feed Hole Center to Pitch	P1	$\frac{3.85 \pm 0.7}{(0.15 \pm 0.03)}$
Feed Hole Center to Component Center	P2	$\frac{6.35 \pm 0.7}{(0.25 \pm 0.03)}$
Lead to Lead Distance	F	$\frac{5.00 \pm 0.8}{(0.20 \pm 0.03)}$
Component Alignment	$\Delta h$	$\frac{2.0}{(0.79)}$ max.
Tape Width	W	$\frac{18.0 \pm 0.5}{(0.71 \pm 0.02)}$
Hole Down Tape Width	W0	$\frac{12.0 \pm 0.8}{(0.47 \pm 0.03)}$
Hole Position	W1	$\frac{9.0 \pm 0.5}{(0.35 \pm 0.02)}$
Hole Down Tape Position	W2	$\frac{3.0}{(0.12)}$ max.
Height From Component Top to Kinked Base	H	$\frac{13.5}{(0.53)}$ max.
Seating Plane Height	H0	$\frac{16.0 \pm 0.5}{(0.63 \pm 0.02)}$
Component Height	H1	$\frac{32.0}{(1.26)}$ max.
Feed Hole Diameter	D0	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$
Total Tape Thickness	t	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$

Item	Symbol	10 mm Disc	14 mm Disc	20 mm Disc
Pitch of Component	P	$\frac{25.4 \pm 1.0}{(1.00 \pm 0.04)}$	$\frac{25.4 \pm 1.0}{(1.00 \pm 0.04)}$	$\frac{25.4 \pm 1.0}{(1.00 \pm 0.04)}$
Feed Hole Pitch	P0	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$
Feed Hole Center to Pitch	P1	$\frac{8.95 \pm 0.7}{(0.352 \pm 0.03)}$	$\frac{8.95 \pm 0.7}{(0.352 \pm 0.03)}$	$\frac{7.77 \pm 0.7}{(0.31 \pm 0.03)}$
Feed Hole Center to Component Center	P2	$\frac{12.7 \pm 0.7}{(0.50 \pm 0.03)}$	$\frac{12.7 \pm 0.7}{(0.50 \pm 0.03)}$	$\frac{12.7 \pm 0.7}{(0.50 \pm 0.03)}$
Lead to Lead Distance	F	$\frac{7.50 \pm 0.8}{(0.30 \pm 0.03)}$	$\frac{7.50 \pm 0.8}{(0.30 \pm 0.03)}$	$\frac{10.0 \pm 0.8}{(0.39 \pm 0.03)}$
Component Alignment	$\Delta h$	$\frac{2.0}{(0.79)}$ max.	$\frac{4.0}{(0.157)}$ max.	$\frac{4.0}{(0.157)}$ max.
Tape Width	W	$\frac{18.0 \pm 0.5}{(0.71 \pm 0.02)}$	$\frac{18.0 \pm 0.5}{(0.71 \pm 0.02)}$	$\frac{18.0 \pm 0.5}{(0.71 \pm 0.02)}$
Hole Down Tape Width	W0	$\frac{12.0 \pm 0.8}{(0.47 \pm 0.03)}$	$\frac{12.0 \pm 0.8}{(0.47 \pm 0.03)}$	$\frac{12.0 \pm 0.8}{(0.47 \pm 0.03)}$
Hole Position	W1	$\frac{9.0 \pm 0.5}{(0.35 \pm 0.02)}$	$\frac{9.0 \pm 0.5}{(0.35 \pm 0.02)}$	$\frac{9.0 \pm 0.5}{(0.35 \pm 0.02)}$
Hole Down Tape Position	W2	$\frac{3.0}{(0.12)}$ max.	$\frac{3.0}{(0.12)}$ max.	$\frac{3.0}{(0.12)}$ max.
Height From Component Top to Kinked Base	H	$\frac{17.5}{(0.69)}$ max.	$\frac{21.0}{(0.83)}$ max.*	$\frac{28.0}{(1.10)}$ max.**
Seating Plane Height	H0	$\frac{16.0 \pm 0.5}{(0.63 \pm 0.02)}$	$\frac{16.0 \pm 0.5}{(0.63 \pm 0.02)}$	$\frac{16.0 \pm 0.5}{(0.63 \pm 0.02)}$
Component Height	H1	$\frac{36.0}{(1.42)}$ max.	$\frac{40.0}{(1.57)}$ max.	$\frac{47.0}{(1.85)}$ max.
Feed Hole Diameter	D0	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$
Total Tape Thickness	t	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$

\* Model MOV-14D561K-821K = 23.0/(0.91) max.

\*\* Model MOV-20D561K-821K = 30.0/(1.18) max.

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$