Applications

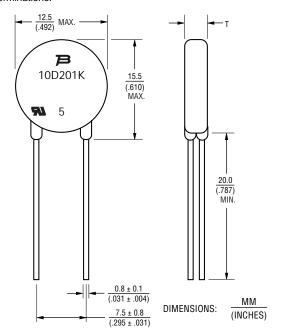
- Power supplies
- Power systems
- Line voltage
- Telecom systems
- White goods / appliances

MOV-10DxxxK Series - Metal Oxide Varistor

BOURNS

Product Dimensions

This is an RoHS compliant molded radial package with 100 % Sn plating on the terminations.



Bourns Part Number	Dim. T (Max.)
MOV-10D180K	3.8 (.150)
MOV-10D220K	3.9 (.154)
MOV-10D270K	4.2 (.165)
MOV-10D330K	3.8 (.150)
MOV-10D390K	4.0 (.157)
MOV-10D470K	4.2 (.165)
MOV-10D560K	4.3 (.169)
MOV-10D680K	4.4 (.173)
MOV-10D820K	3.8 (.150)
MOV-10D101K	4.0 (.157)
MOV-10D121K	4.2 (.165)
MOV-10D151K	4.4 (.173)
MOV-10D181K	3.6 (.142)
MOV-10D201K	3.8 (.150)
MOV-10D221K	3.9 (.154)

Bourns Part Number	Dim. T (Max.)
MOV-10D241K	4.0 (.157)
MOV-10D271K	4.2 (.165)
MOV-10D301K	4.4 (.173)
MOV-10D331K	4.6 (.181)
MOV-10D361K	4.8 (.189)
MOV-10D391K	5.0 (.197)
MOV-10D431K	5.2 (.205)
MOV-10D471K	5.4 (.213)
MOV-10D511K	5.5 (.217)
MOV-10D561K	5.9 (.232)
MOV-10D621K	$\frac{6.2}{(.244)}$
MOV-10D681K	$\frac{6.4}{(.252)}$
MOV-10D751K	6.6 (.260)
MOV-10D781K	6.8 (.268)
MOV-10D821K	$\frac{7.2}{(.283)}$

Typical Part Marking

Bourns Part Number	Bourns Part Marking		
MOV-10D180K	10D180K		
MOV-10D220K	10D220K		
MOV-10D270K	10D270K		
MOV-10D330K	10D330K		
MOV-10D390K	10D390K		
MOV-10D470K	10D470K		
MOV-10D560K	10D560K		
MOV-10D680K	10D680K		
MOV-10D820K	10D820K		
MOV-10D101K	10D101K		
MOV-10D121K	10D121K		
MOV-10D151K	10D151K		
MOV-10D181K	10D181K		
MOV-10D201K	10D201K		
MOV-10D221K	10D221K		
MOV-10D241K	10D241K		
MOV-10D271K	10D271K		
MOV-10D301K	10D301K		
MOV-10D331K	10D331K		
MOV-10D361K	10D361K		
MOV-10D391K	10D391K		
MOV-10D431K	10D431K		
MOV-10D471K	10D471K		
MOV-10D511K	10D511K		
MOV-10D561K	10D561K		
MOV-10D621K	10D621K		
MOV-10D681K	10D681K		
MOV-10D751K	10D751K		
MOV-10D781K	10D781K		
MOV-10D821K	10D821K		

NOTE: The "5" marking on MOV products is for traceability of production assembly for quality assurance compliance.

How to Order MOV - 10D nn (n) K (TR) Model Designator MOV = Metal Oxide Varistor Disc Diameter 10D = 10 mmNominal Varistor Voltage See Electrical Characteristics Table Multiplier of Voltage Digits 0 = No multiplier $1 = nn * 10^{1}$ Varistor Voltage Tolerance K = 10 %Packaging -Blank = Bulk TR = Tape & Reel Examples: MOV-10D270K = 27 V, Bulk Pack MOV-10D331KTR = 330 V, Tape & Reel

Specifications are subject to change without notice.

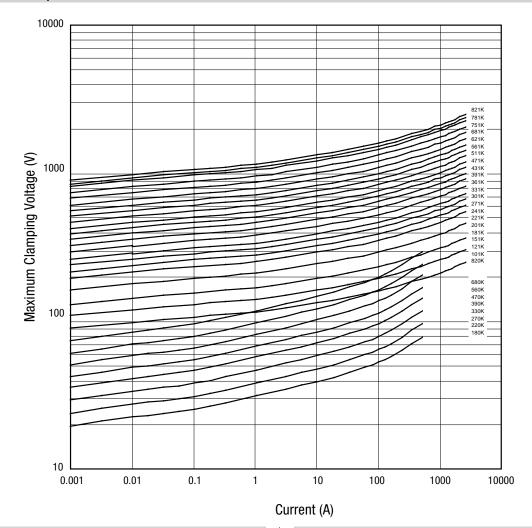
Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at

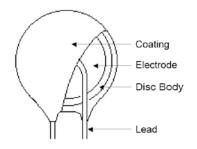
www.bourns.com/docs/legal/disclaimer.pdf.

MOV-10DxxxK Series - Metal Oxide Varistor

Performance Graphs



Internal Construction



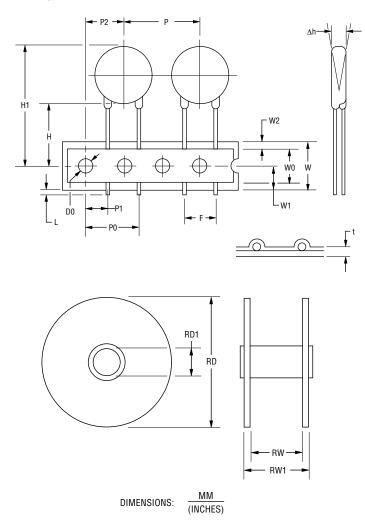
Environmental Specifications

Moisture Sensitivity Level.....

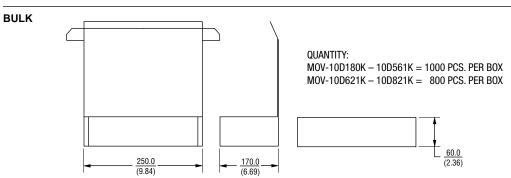
MOV-10DxxxK Series - Metal Oxide Varistor

Packaging Information

TAPE & REEL



Item	Symbol	10 mm Disc
Reel Outside Diameter	RD	_ 355
Neel Outside Diameter	ND.	(13.98)
Reel Inner Diameter	RD1	30
Tree Inner Bramere		(1.181)
Tape Width	RW	<u>55</u> (2.16)
Reel Width	RW1	$\frac{63}{(2.48)}$ max.
Pitch of Component	Р	$\frac{25.4 \pm 0.7}{(1.00 \pm 0.03)}$
Feed Hole Pitch	P0	$\frac{12.7 \pm 1.0}{(0.50 \pm 0.04)}$
Feed Hole Center to Pitch	P1	$\frac{8.95 \pm 0.7}{(0.352 \pm 0.03)}$
Feed Hole Center to Component Center	P2	$\frac{12.7 \pm 1.0}{(0.50 \pm 0.04)}$
Lead to Lead Distance	F	$\frac{7.50 \pm 0.8}{(0.30 \pm 0.03)}$
Component Alignment	Δh	2.0 (0.079)
Tape Width	W	$\frac{18.0 \pm 0.5}{(0.71 \pm 0.02)}$
Hole Down Tape Width	Wo	$\frac{12.0 \pm 0.8}{(0.47 \pm 0.03)}$
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	Н	$\frac{19.0 \pm 1.0}{(0.75 \pm 0.04)}$
Seating Plane Height	H0	$\frac{16.0 \pm 1.0}{(0.63 \pm 0.04)}$
Component Height	H1	$\frac{36.0}{(1.42)}$ max.
Crimp Length	С	$\frac{2.60}{(0.10)}$ typ.
Feed Hole Diameter	D0	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$
Total Tape Thickness	t	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$
Length of Clipped Height	L	$\frac{1.0}{(0.04)}$ max.
Quantity per Reel (10D180K – 10D361K)	-	1000
Quantity per Reel (10D391K – 10D821K)	-	500



REV. 08/17

Specifications are subject to change without notice.

Legal Disclaimer Notice



This legal disclaimer applies to purchasers and users of Bourns® products manufactured by or on behalf of Bourns, Inc. and its affiliates (collectively, "Bourns").

Unless otherwise expressly indicated in writing, Bourns® products and data sheets relating thereto are subject to change without notice. Users should check for and obtain the latest relevant information and verify that such information is current and complete before placing orders for Bourns® products.

The characteristics and parameters of a Bourns® product set forth in its data sheet are based on laboratory conditions, and statements regarding the suitability of products for certain types of applications are based on Bourns' knowledge of typical requirements in generic applications. The characteristics and parameters of a Bourns® product in a user application may vary from the data sheet characteristics and parameters due to (i) the combination of the Bourns® product with other components in the user's application, or (ii) the environment of the user application itself. The characteristics and parameters of a Bourns® product also can and do vary in different applications and actual performance may vary over time. Users should always verify the actual performance of the Bourns® product in their specific devices and applications, and make their own independent judgments regarding the amount of additional test margin to design into their device or application to compensate for differences between laboratory and real world conditions.

Unless Bourns has explicitly designated an individual Bourns® product as meeting the requirements of a particular industry standard (e.g., ISO/TS 16949) or a particular qualification (e.g., UL listed or recognized), Bourns is not responsible for any failure of an individual Bourns® product to meet the requirements of such industry standard or particular qualification. Users of Bourns® products are responsible for ensuring compliance with safety-related requirements and standards applicable to their devices or applications.

Bourns® products are not recommended, authorized or intended for use in nuclear, lifesaving, life-critical or life-sustaining applications, nor in any other applications where failure or malfunction may result in personal injury, death, or severe property or environmental damage. Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any Bourns® products in such unauthorized applications might not be safe and thus is at the user's sole risk. Life-critical applications include devices identified by the U.S. Food and Drug Administration as Class III devices and generally equivalent classifications outside of the United States.

Bourns expressly identifies those Bourns® standard products that are suitable for use in automotive applications on such products' data sheets in the section entitled "Applications." Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any other Bourns® standard products in an automotive application might not be safe and thus is not recommended, authorized or intended and is at the user's sole risk. If Bourns expressly identifies a sub-category of automotive application in the data sheet for its standard products (such as infotainment or lighting), such identification means that Bourns has reviewed its standard product and has determined that if such Bourns® standard product is considered for potential use in automotive applications, it should only be used in such sub-category of automotive applications. Any reference to Bourns® standard product in the data sheet as compliant with the AEC-Q standard or "automotive grade" does not by itself mean that Bourns has approved such product for use in an automotive application.

Bourns® standard products are not tested to comply with United States Federal Aviation Administration standards generally or any other generally equivalent governmental organization standard applicable to products designed or manufactured for use in aircraft or space applications. Bourns expressly identifies Bourns® standard products that are suitable for use in aircraft or space applications on such products' data sheets in the section entitled "Applications." Unless expressly and specifically approved in writing by two authorized Bourns representatives on a case-by-case basis, use of any other Bourns® standard product in an aircraft or space application might not be safe and thus is not recommended, authorized or intended and is at the user's sole risk.

The use and level of testing applicable to Bourns® custom products shall be negotiated on a case-by-case basis by Bourns and the user for which such Bourns® custom products are specially designed. Absent a written agreement between Bourns and the user regarding the use and level of such testing, the above provisions applicable to Bourns® standard products shall also apply to such Bourns® custom products.

Users shall not sell, transfer, export or re-export any Bourns® products or technology for use in activities which involve the design, development, production, use or stockpiling of nuclear, chemical or biological weapons or missiles, nor shall they use Bourns® products or technology in any facility which engages in activities relating to such devices. The foregoing restrictions apply to all uses and applications that violate national or international prohibitions, including embargos or international regulations. Further, Bourns® products and Bourns technology and technical data may not under any circumstance be exported or re-exported to countries subject to international sanctions or embargoes. Bourns® products may not, without prior authorization from Bourns and/or the U.S. Government, be resold, transferred, or re-exported to any party not eligible to receive U.S. commodities, software, and technical data.

To the maximum extent permitted by applicable law, Bourns disclaims (i) any and all liability for special, punitive, consequential, incidental or indirect damages or lost revenues or lost profits, and (ii) any and all implied warranties, including implied warranties of fitness for particular purpose, non-infringement and merchantability.

For your convenience, copies of this Legal Disclaimer Notice with German, Spanish, Japanese, Traditional Chinese and Simplified Chinese bilingual versions are available at:

Web Page: http://www.bourns.com/legal/disclaimers-terms-and-policies

PDF: http://www.bourns.com/docs/Legal/disclaimer.pdf

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Bourns:

```
PN-DESIGNKIT-20 MOV-10D101K MOV-10D101KTR MOV-10D121K MOV-10D121KTR MOV-10D151K MOV-10D151K MOV-10D151KTR MOV-10D180KTR MOV-10D180KTR MOV-10D181K MOV-10D181KTR MOV-10D201K MOV-10D201KTR MOV-10D220K MOV-10D220KTR MOV-10D221K MOV-10D221KTR MOV-10D241K MOV-10D241KTR MOV-10D270K MOV-10D270KTR MOV-10D271K MOV-10D271KTR MOV-10D301K MOV-10D301KTR MOV-10D330K MOV-10D330KTR MOV-10D331K MOV-10D331KTR MOV-10D361K MOV-10D361KTR MOV-10D390KTR MOV-10D391KTR MOV-10D391KTR MOV-10D431K MOV-10D431KTR MOV-10D470K MOV-10D470KTR MOV-10D471K MOV-10D471KTR MOV-10D511K MOV-10D511KTR MOV-10D560K MOV-10D560KTR MOV-10D561K MOV-10D561KTR MOV-10D621K MOV-10D621KTR MOV-10D680K MOV-10D680KTR MOV-10D681K MOV-10D681KTR MOV-10D751K MOV-10D751KTR MOV-10D781K MOV-10D781KTR MOV-10D781K MOV-10D820KTR MOV-10D820KTR MOV-10D821KTR MOV-10D821KTR MOV-10D821KTR
```