

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number: MOV-20D102KTR
Manufacturer: Bourns Inc.
Package: Disc 20mm
Availability: Please confirm with sales

Product Page:

<https://antrexco.com/product/details/bourns-inc/mov-20d102ktr.html>

Request a Quote:

[Submit RFQ for this part](#)



Scan for product page

Contact Information

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Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

MOV-20DxxxK Series – Metal Oxide Varistor

BOURNS®

Product Dimensions (Continued)

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

Kinked Leads (Outward)



Bourns Part Number	Dim T (Max.)	Dim H (Max.)	Dim a (Typ.)
MOV-20D180KK	$\frac{4.2}{(.165)}$	28.0 (1.102)	$\frac{1.8}{(.071)}$
MOV-20D220KK	$\frac{4.3}{(.169)}$		$\frac{1.8}{(.071)}$
MOV-20D270KK	$\frac{4.6}{(.181)}$		$\frac{1.8}{(.071)}$
MOV-20D330KK	$\frac{4.2}{(.165)}$		$\frac{1.9}{(.075)}$
MOV-20D390KK	$\frac{4.4}{(.173)}$		$\frac{2.1}{(.083)}$
MOV-20D470KK	$\frac{4.6}{(.181)}$		$\frac{2.3}{(.091)}$
MOV-20D560KK	$\frac{4.7}{(.185)}$		$\frac{2.5}{(.098)}$
MOV-20D680KK	$\frac{4.8}{(.189)}$		$\frac{2.8}{(.110)}$
MOV-20D820KK	$\frac{4.2}{(.165)}$		$\frac{1.8}{(.071)}$
MOV-20D101KK	$\frac{4.4}{(.173)}$		$\frac{1.9}{(.075)}$
MOV-20D121KK	$\frac{4.6}{(.181)}$		$\frac{1.9}{(.075)}$
MOV-20D151KK	$\frac{4.8}{(.189)}$		$\frac{2.0}{(.079)}$
MOV-20D181KK	$\frac{4.0}{(.157)}$		$\frac{2.1}{(.083)}$
MOV-20D201KK	$\frac{4.2}{(.165)}$		$\frac{2.2}{(.087)}$
MOV-20D221KK	$\frac{4.3}{(.169)}$		$\frac{2.3}{(.091)}$
MOV-20D241KK	$\frac{4.4}{(.173)}$		$\frac{2.4}{(.094)}$
MOV-20D271KK	$\frac{4.6}{(.181)}$		$\frac{2.5}{(.098)}$
MOV-20D301KK	$\frac{4.8}{(.189)}$		$\frac{2.7}{(.106)}$

Bourns Part Number	Dim T (Max.)	Dim H (Max.)	Dim a (Typ.)
MOV-20D331KK	$\frac{5.0}{(.197)}$	28.0 (1.102)	$\frac{2.8}{(.110)}$
MOV-20D361KK	$\frac{5.2}{(.205)}$		$\frac{2.9}{(.114)}$
MOV-20D391KK	$\frac{5.4}{(.213)}$		$\frac{3.1}{(.122)}$
MOV-20D431KK	$\frac{5.6}{(.220)}$		$\frac{3.3}{(.130)}$
MOV-20D471KK	$\frac{5.9}{(.232)}$		$\frac{3.4}{(.134)}$
MOV-20D511KK	$\frac{6.0}{(.236)}$	30.0 (1.181)	$\frac{3.7}{(.146)}$
MOV-20D561KK	$\frac{6.5}{(.256)}$		$\frac{3.9}{(.154)}$
MOV-20D621KK	$\frac{6.9}{(.272)}$		$\frac{4.1}{(.161)}$
MOV-20D681KK	$\frac{7.0}{(.276)}$		$\frac{4.2}{(.165)}$
MOV-20D751KK	$\frac{7.2}{(.283)}$		$\frac{4.4}{(.173)}$
MOV-20D781KK	$\frac{7.4}{(.291)}$	N/A See Kinked Leads (In-line) Configuration	$\frac{4.4}{(.173)}$
MOV-20D821KK			
MOV-20D911KK*			
MOV-20D102KK*			
MOV-20D112KK*			
MOV-20D152KK*			
MOV-20D182KK*			

* Not available in Tape & Reel packaging.

(Kinked Lead Product Dimensions continue on page 4.)

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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MOV-20DxxxK Series – Metal Oxide Varistor

BOURNS®

Product Dimensions (Continued)

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

Kinked Leads (In-line)



Bourns Part Number	Dim T (Max.)
MOV-20D180KK	N/A See Kinked Leads (Outward) Configuration
MOV-20D220KK	
MOV-20D270KK	
MOV-20D330KK	
MOV-20D390KK	
MOV-20D470KK	
MOV-20D560KK	
MOV-20D680KK	
MOV-20D820KK	
MOV-20D101KK	
MOV-20D121KK	
MOV-20D151KK	
MOV-20D181KK	
MOV-20D201KK	
MOV-20D221KK	
MOV-20D241KK	
MOV-20D271KK	
MOV-20D301KK	

Bourns Part Number	Dim T (Max.)
MOV-20D331KK	N/A See Kinked Leads (Outward) Configuration
MOV-20D361KK	
MOV-20D391KK	
MOV-20D431KK	
MOV-20D471KK	
MOV-20D511KK	
MOV-20D561KK	
MOV-20D621KK	
MOV-20D681KK	
MOV-20D751KK	
MOV-20D821KK	$\frac{7.8}{(.307)}$
MOV-20D911KK*	$\frac{8.2}{(.323)}$
MOV-20D102KK*	$\frac{8.7}{(.343)}$
MOV-20D112KK*	$\frac{9.2}{(.362)}$
MOV-20D152KK*	$\frac{11.4}{(.449)}$
MOV-20D182KK*	$\frac{13.0}{(.512)}$

* Not available in Tape & Reel packaging.

Typical Part Marking

Bourns Part Number	Bourns Part Marking
MOV-20D180K	20D180K
MOV-20D220K	20D220K
MOV-20D270K	20D270K
MOV-20D330K	20D330K
MOV-20D390K	20D390K
MOV-20D470K	20D470K
MOV-20D560K	20D560K
MOV-20D680K	20D680K
MOV-20D820K	20D820K
MOV-20D101K	20D101K
MOV-20D121K	20D121K
MOV-20D151K	20D151K
MOV-20D181K	20D181K
MOV-20D201K	20D201K
MOV-20D221K	20D221K
MOV-20D241K	20D241K
MOV-20D271K	20D271K
MOV-20D301K	20D301K
MOV-20D331K	20D331K
MOV-20D361K	20D361K
MOV-20D391K	20D391K
MOV-20D431K	20D431K
MOV-20D471K	20D471K
MOV-20D511K	20D511K
MOV-20D561K	20D561K
MOV-20D621K	20D621K
MOV-20D681K	20D681K
MOV-20D751K	20D751K
MOV-20D781K	20D781K
MOV-20D821K	20D821K
MOV-20D911K	20D911K
MOV-20D102K	20D102K
MOV-20D112K	20D112K
MOV-20D152K	20D152K
MOV-20D182K	20D182K

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

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MOV-20DxxxK Series – Metal Oxide Varistor

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How to Order

MOV - 20D nn (n) K (TR)

Model Designator _____
MOV = Metal Oxide Varistor

Disc Diameter _____
20D = 20 mm

Nominal Varistor Voltage _____
See Electrical Characteristics Table

Multiplier of Voltage Digits _____
0 = No multiplier
1 = nn * 10¹
2 = nn * 10²

Varistor Voltage Tolerance _____
K = 10 %

Lead Style _____
Blank = Straight Leads
K = Kinked Leads

Packaging _____
Blank = Bulk
TR = Tape & Reel*

Examples: MOV-20D270KK = 27 V, Kinked Leads, Bulk Pack

MOV-20D331KTR = 330 V, Straight Leads, Tape & Reel

* Models MOV-20D911K, 102K, 112K, 152K and 182K are not available in Tape & Reel packaging.

Environmental Specifications

Moisture Sensitivity Level 1
ESD Classification (HBM)..... N/A

Internal Construction



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MOV-20DxxxK Series – Metal Oxide Varistor

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Performance Graphs

V-I Characteristics

MOV-20D180K to MOV-20D680K



MOV-20D820K to MOV-20D431K



MOV-20D471K to MOV-20D182K



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MOV-20DxxxK Series – Metal Oxide Varistor

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Pulse Rating Curves



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MOV-20DxxxK Series – Metal Oxide Varistor

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Packaging Information

TAPE & REEL - Straight Leads



Item	Symbol	20 mm Disc
Reel Outside Diameter	RD	$\frac{355}{(13.98)}$
Reel Inner Diameter	RD1	$\frac{30}{(1.181)}$
Tape Width	RW	$\frac{55}{(2.16)}$
Reel Width	RW1	$\frac{63}{(2.48)} \text{ max.}$
Pitch of Component	P	$\frac{25.4 \pm 1.0}{(1.00 \pm 0.04)}$
Feed Hole Pitch	P0	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$
Feed Hole Center to Pitch	P1	$\frac{7.77 \pm 0.7}{(0.31 \pm 0.03)}$
Feed Hole Center to Component Center	P2	$\frac{12.7 \pm 0.7}{(0.50 \pm 0.03)}$
Lead to Lead Distance	F	$\frac{10.0 \pm 0.8}{(0.39 \pm 0.03)}$
Component Alignment	Δh	$\frac{4.0}{(0.16)} \text{ max.}$
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	$\frac{3.0}{(0.12)} \text{ max.}$
Height From Center to Component Base	H	$\frac{19.0 \pm 1.0}{(0.75 \pm 0.04)}$
Component Height	H1	$\frac{47.0}{(1.85)} \text{ max.}$
Feed Hole Diameter	D0	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$
Total Tape Thickness	t	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$
Quantity per Reel	-	250

NOTE: Models MOV-20D911K, 102K, 112K, 152K and 182K are not available in Tape & Reel packaging.

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MOV-20DxxxK Series – Metal Oxide Varistor

BOURNS®

Packaging Information (Continued)

TAPE & REEL - Kinked Leads



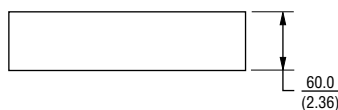
NOTE: Models MOV-20D911KK, 102KK, 112KK, 152KK and 182KK are not available in Tape & Reel packaging.

Item	Symbol	20 mm Disc
Reel Outside Diameter	RD	$\frac{355}{(13.98)}$
Reel Inner Diameter	RD1	$\frac{30}{(1.181)}$
Tape Width	RW	$\frac{55}{(2.16)}$
Reel Width	RW1	$\frac{63}{(2.48)}$ max.
Pitch of Component	P	$\frac{25.4 \pm 1.0}{(1.00 \pm 0.04)}$
Feed Hole Pitch	P0	$\frac{12.7 \pm 0.2}{(0.50 \pm 0.008)}$
Feed Hole Center to Pitch	P1	$\frac{7.77 \pm 0.7}{(0.31 \pm 0.03)}$
Feed Hole Center to Component Center	P2	$\frac{12.7 \pm 0.7}{(0.50 \pm 0.03)}$
Lead to Lead Distance	F	$\frac{10.0 \pm 0.8}{(0.39 \pm 0.03)}$
Component Alignment	Δh	$\frac{4.0}{(0.157)}$ 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 (MOV-20D180KK~511KK)	H	$\frac{28.0}{(1.10)}$ max.
Height From Component Top to Kinked Base (MOV-20D561KK~821KK)	H	$\frac{30.0}{(1.18)}$ max.
Seating Plane Height	H0	$\frac{16.0 \pm 0.5}{(0.63 \pm 0.02)}$
Component Height	H1	$\frac{47.0}{(1.85)}$ max.
Feed Hole Diameter	D0	$\frac{4.0 \pm 0.2}{(0.16 \pm 0.08)}$
Total Tape Thickness	t	$\frac{0.6 \pm 0.3}{(0.02 \pm 0.01)}$
Quantity per Reel	-	250

BULK



QUANTITY:
 MOV-20D180K – 20D301K = 500 PCS. PER BOX
 MOV-20D331K – 20D431K = 400 PCS. PER BOX
 MOV-20D471K – 20D821K = 300 PCS. PER BOX
 MOV-20D911K – 20D182K = 200 PCS. PER BOX



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REV. 07/25

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