

#### **Features**

- Compliant with AEC-Q200 Rev-C -Stress Test Qualification for Passive Components in Automotive Applications
- Small footprint size (1206)
- Operating temperature range up to 125 °C
- Low thermal derating factor
- Higher hold currents at elevated temperatures
- RoHS compliant\*

#### **Applications**

- Protection of automotive circuitry including engine control modules
- Overcurrent surge protection of electronic equipment required to operate at high operating temperature ranges
- Resettable fault protection for general electronic equipment

## **MF-NSHT Series - PTC Resettable Fuses**

#### **Electrical Characteristics**

Madal	V max.	I max.	lhold	I <sub>trip</sub>	Resis	stance	Max. To	Tripped Power Dissipation	
Model	Volts	Amps		Amperes at 23 °C		Ohms at 23 °C		Seconds at 23 °C	Watts at 23 °C
			Hold	Trip	R <sub>Min.</sub>	R <sub>1Max.**</sub>			Тур.
MF-NSHT016KX	30	20	0.16	0.80	0.7	6.0	8.0	0.1	0.9
MF-NSHT035KX	30	20	0.35	1.75	0.4	2.6	8.0	0.1	0.9

<sup>\*\*</sup>R<sub>1Max.</sub> measured 24 hours post reflow.

#### **Environmental Characteristics**

Operating Temperature	40 °C to +125 °C	
Passive Aging	+125 °C, 1000 hours	. R <sub>final</sub> <r<sub>1max.</r<sub>
	+85 °C, 85 % R.H. 1000 hours	
Thermal Shock	+125 °C to -40 °C, 20 times	. R <sub>final</sub> <r<sub>1max</r<sub>
	MIL-STD-202, Method 215	
Vibration	MIL-STD-883C, Method 2007.1,	. No change
	Condition A	•
Moisture Sensitivity Level (MSL)	Level 1	
ESD Classification - HBM	Class 6	

#### Test Procedures And Requirements For Model MF-NSHT Series

Test	Test Conditions	Accept/Reject Criteria
Visual/Mech	. Verify dimensions and materials	. Per MF physical description
Resistance	. In still air @ 23 °C	R <sub>min</sub> ≤ R ≤ R <sub>1max</sub>
Time to Trip	. At specified current, Vmax, 23 °C	T ≤ max. time to trip (seconds)
Hold Current	. 30 min. at I <sub>hold</sub>	No trip
Trip Cycle Life	. V <sub>max</sub> , I <sub>max</sub> , 100 cycles	. No arcing or burning
Trip Endurance	. V <sub>max</sub> , 48 hours	No arcing or burning
Solderability	. ANSI/J-STD-002	. 95 % min. coverage

### Thermal Derating Chart - Ihold (Amps)

Madal	Ambient Operating Temperature									
Model	-40 °C	-20 °C	0 °C	+23 °C	+40 °C	+50 °C	+60 °C	+70 °C	+85 °C	+125 °C
MF-NSHT016KX	0.232	0.210	0.186	0.160	0.141	0.130	0.118	0.107	0.090	0.043
MF-NSHT035KX	0.508	0.459	0.406	0.350	0.308	0.284	0.259	0.235	0.196	0.095

### **BOURNS**®

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WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

# MF-NSHT Series - PTC Resettable Fuses

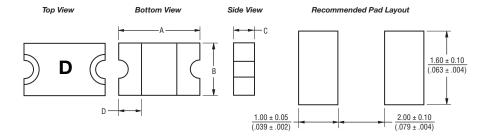
### **BOURNS**

#### **Product Dimensions**

Model		4	E	3	(	D	
Model	Min.	Max.	Min.	Max.	Min.	Max.	Min.
MF-NSHT016KX	3.00	3.40	1.40	1.80	0.40	0.85	0.25
	(0.118)	(0.134)	(0.055)	(0.071)	(0.016)	(0.033)	(0.010)
ME NOUTOOFKY	3.00	3.40	1.40	1.80	0.40	0.85	0.25
MF-NSHT035KX	(0.118)	(0.134)	(0.055)	(0.071)	(0.016)	(0.033)	(0.010)

Packaging: 3000 pcs. per reel.

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



#### Terminal material:

Nickel/gold plated.

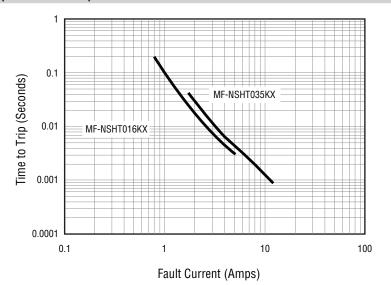
#### Termination pad solderability:

Standard Au finish: Meets ANSI/J-STD-002 Category 2.

#### Recommended Storage:

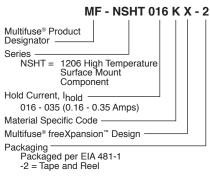
40 °C max./70 % RH max.

#### Typical Time to Trip at 23 °C



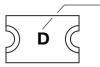
The Time to Trip curves represent typical performance of a device in a simulated application environment. Actual performance in specific customer applications may differ from these values due to the influence of other variables.

### How to Order



#### **Typical Part Marking**

Represents total content. Layout may vary.



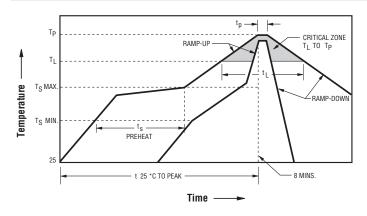
PART IDENTIFICATION: MF-NSHT016KX = D MF-NSHT035KX = F

BIWEEKLY DATE CODE WILL APPEAR ON THE PACKAGING LABEL: WEEK 1 AND 2 = A WEEK 51 AND 52 = Z

# MF-NSHT Series - PTC Resettable Fuses

### BOURNS

#### **Solder Reflow Recommendations**



#### Notes:

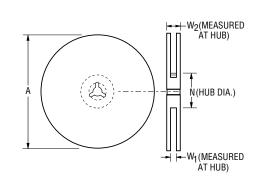
- MF-NSHT models cannot be wave soldered or hand soldered. Please contact Bourns for soldering recommendations.
- All temperatures refer to topside of the package, measured on the package body surface.
- If reflow temperatures exceed the recommended profile, devices may not meet the published specifications.
- Compatible with Pb and Pb-free solder reflow profiles.
- Excess solder may cause a short circuit, especially during hand soldering. Please refer to the Multifuse® Polymer PTC Soldering Recommendation guidelines.
- Designed for single solder reflow operations.

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (TS <sub>max</sub> to T <sub>p</sub> )	3 °C / second max.
PREHEAT: Temperature Min. (TS <sub>min</sub> ) Temperature Max. (TS <sub>max</sub> ) Time (ts <sub>min</sub> to ts <sub>max</sub> )	150 °C 200 °C 60~180 seconds
TIME MAINTAINED ABOVE: Temperature $(T_L)$ Time $(t_L)$	217 °C 60~150 seconds
Peak / Classification Temperature (T <sub>P</sub> )	260 °C
Time within 5 °C of Actual Peak Temperature (tp)	20~40 seconds
Ramp-Down Rate	6 °C / second max.
Time within 25 °C to Peak Temperature	8 minutes max.

# **MF-NSHT Series Tape and Reel Specifications**

P2       2.0 ± 0.05 (0.079 ± 0.002)         A0       1.95 ± 0.10 (0.077 ± 0.004)         B0       3.55 ± 0.10 (0.140 ± 0.004)         B1 max.       4.35 (0.171)         D0       1.5 + 0.10 (0.07 ± 0.004)         F       3.5 ± 0.05 (0.138 ± 0.002)         E1       1.75 ± 0.10 (0.069 ± 0.004)         E2 min.       6.25 (0.246)         T max.       0.6 (0.024)         T max.       0.1 (0.004)         K0       0.80 ± 0.15 (0.024)         K0       0.80 ± 0.15 (0.031 ± 0.006)         Leader min.       160 (6.30)         Trailer min.       160 (6.30)         Reel Dimensions       185 (7.28)         N min.       5.0 (1.97)         2.4 ± 1.5 (0.00)       2.4 ± 1.5 (0.00)		MF-NSHT Series
W         (0.315 ± 0.012)           P0         4.0 ± 0.10           P1         4.0 ± 0.00           (0.157 ± 0.004)         (0.157 ± 0.004)           P2         2.0 ± 0.05           (0.079 ± 0.002)         (0.079 ± 0.002)           A0         1.95 ± 0.10           (0.077 ± 0.004)         (0.104 ± 0.004)           B1 max.         4.35           (0.179 ± 0.004)         (0.059 ± 0.004/°)           F         3.5 ± 0.05           (0.138 ± 0.002)         (0.138 ± 0.002)           E1         1.75 ± 0.10           (0.069 ± 0.004/°)         (0.248)           E2 min.         6.25           (0.248)         (0.248)           T max.         0.6           (0.024)         (0.004)           T1 max.         0.0           K0         0.004)           K1         (0.004)           K2         (0.004)           K3         (0.004)           K3         (0.004)           K4         (0.004)           K5         (0.004)           K6         (0.004)           K7         (0.004)           K8         (0.004)           K9 <th>Tape Dimensions</th> <th></th>	Tape Dimensions	
PO         4.0 ± 0.10           P1         4.0 ± 0.10           P2         2.0 ± 0.05           A0         1.95 ± 0.10           B0         3.55 ± 0.10           B1 max.         4.35           B1 max.         4.35           B1 max.         4.35           B2 min.         5.5 ± 0.05           B2 min.         6.25           B3 min.         6.25           B4 max.         6.06           B5 min.         6.25           B6 min.         6.25           B7 max.         6.06           B8 min.         6.25           B9 min.         6.25           B1 max.         6.06           B2 min.         6.25           B2 min.         6.0	W	
PO (0.157 ± 0.004) P1 (0.157 ± 0.004) P2 (0.079 ± 0.005) P2 (0.079 ± 0.005) P3 (0.079 ± 0.005) P6 (0.077 ± 0.004) P6 (0.077 ± 0.004) P6 (0.077 ± 0.004) P6 (0.077 ± 0.004) P7 (0.140 ± 0.004) P8 (0.171) P9 (0.140 ± 0.004) P1 max. 435 (0.171) P0 (0.059 ± 0.004-0) P1 (0.059 ± 0.004-0) P1 (0.059 ± 0.004-0) P1 (0.059 ± 0.004-0) P2 min. 6.25 (0.246) P3 (0.069 ± 0.004) P3 (0.069 ± 0.004) P4 (0.069 ± 0.004) P5 (0.069 ± 0.004) P6 (0.069 ± 0.004) P7 max. (0.024) P7 ma		
P1         (0.15 ± 0.004) (0.157 ± 0.004)           P2         (2.0 ± 0.05) (0.079 ± 0.002)           A0         (1.95 ± 0.10) (0.077 ± 0.004)           B0         (3.55 ± 0.10) (0.140 ± 0.004)           B1 max.         4.35 (0.171)           D0         1.5 ± 0.10/-0.0           F         3.5 ± 0.05 (0.059 ± 0.004/-0)           E1         1.75 ± 0.10 (0.059 ± 0.004)           E2 min.         6.25 (0.024)           T max.         0.6 (0.024)           T <sub>1</sub> max.         0.1 (0.024)           K <sub>0</sub> 0.80 ± 0.15 (0.031 ± 0.006)           Leader min.         90 (0.031 ± 0.006)           Reel Dimensions         150 (6.30)           Nmin.         150 (0.331 ± 0.059/-0.006)           W <sub>1</sub> 8.4 ± 1.5/-0.0 (0.331 ± 0.059/-0.006)           W <sub>1</sub> 8.4 ± 1.5/-0.0 (0.331 ± 0.059/-0.009)           W <sub>1</sub> 14.4	Pn	
P1         (0.157 ± 0.004)           P2         (0.079 ± 0.002)           A0         1.95 ± 0.10           B0         3.55 ± 0.10           B1 max.         4.35           D0         (0.171)           D0         1.5 + 0.10/-0.0           (0.059 + 0.004/-0)         (0.059 + 0.004/-0)           F         (3.35 ± 0.05)           (1.338 ± 0.002)         (0.138 ± 0.002)           E1         1.75 ± 0.10           (0.069 ± 0.004)         (0.069 ± 0.004)           E2 min.         6.25           (0.246)         (0.024)           T max.         0.6           (0.024)         (0.004)           T <sub>1</sub> max.         0.1           K <sub>0</sub> 0.80 ± 0.15           (0.031 ± 0.006)         (0.004)           Leader min.         15.00           Trailer min.         (0.004)           Reel Dimensions         110           Amax.         185           (7.28)           N min.         50           (1.97)           W <sub>1</sub> (0.31 ± 0.059/-0.0           (0.331 ± 0.059/-0.0         (0.331 ± 0.059/-0.0		
P2         2.0 ± 0.05 (0.079 ± 0.002)           A0         1.85 ± 0.10 (0.077 ± 0.004)           B0         3.55 ± 0.10 (0.140 ± 0.004)           B1 max.         4.35 (0.177)           D0         1.5 + 0.10 + 0.0 (0.059 + 0.004)           F         3.5 ± 0.05 (0.059 + 0.004)           E1         1.75 ± 0.10 (0.009)           E2 min.         6.25 (0.246)           T max.         0.6 (0.024)           T max.         0.0 (0.024)           T_1 max.         0.1 (0.004)           K0         0.80 ± 0.15 (0.004)           K0         0.80 ± 0.15 (0.001)           Colorate min.         390 (15.35)           Trailer min.         160 (6.30)           Reel Dimensions         185 (7.28)           N min.         50 (1.97)           W1         6.4 + 1.5 (-0.0) (0.331 + 0.05)           (197)         (197)           W1         6.4 + 1.5 (-0.0) (0.331 + 0.05)	P <sub>1</sub>	
A0       1.95 ± 0.10 (0.077 ± 0.004)         B0       3.55 ± 0.10 (0.140 ± 0.004)         B₁ max.       4.35 (0.177)         D0       1.5 + 0.10 (-0.0 0 (0.059 + 0.004/-0.0)         F       3.5 ± 0.05 (0.138 ± 0.002)         E₁       1.75 ± 0.10 (0.069 ± 0.004)         E₂ min.       6.25 (0.246)         T max.       0.6 (0.024)         T₁ max.       0.1 (0.024)         K₀       0.80 ± 0.15 (0.004)         K₀       0.80 ± 0.15 (0.031 ± 0.006)         Leader min.       390 (15.35)         Trailer min.       160 (6.30)         Reel Dimensions         N min.       185 (7.28)         N min.       50 (1.97)         W₁       6.4 + 1.5 (-0.0 (0.331 + 0.05) (0.000)         N min.       6.000 (0.000)         Moment       1.44	D-	
AQ     (0.077 ± 0.004)       BQ     3.55 ± 0.10       (0.140 ± 0.004)       B₁ max.     4.35       (0.171)     (0.071)       DQ     1.5 + 0.10/-0.0       F     3.5 ± 0.05       (0.138 ± 0.002)     (0.138 ± 0.002)       E₁     1.75 ± 0.10       (0.069 ± 0.004)     (0.0246)       T max.     0.6       (0.0246)     (0.024)       T₁ max.     0.1       K₀     (0.031 ± 0.006)       Leader min.     390       Tailer min.     160       (6.30)       Reel Dimensions       A max.     185       (7.28)       N min.     50       W1     8.4 + 1.5/-0.0       (0.331 + 0.059/-0.0       14.4	<u>F2</u>	
B0       3.55 ± 0.10 (0.140 ± 0.004)         B₁ max.       4.35 (0.171)         D0       1.5 ± 0.10 (0.059 ± 0.004/0)         F       3.5 ± 0.05 (0.138 ± 0.002)         E₁       1.75 ± 0.10 (0.069 ± 0.004)         E₂ min.       6.25 (0.246)         T max.       0.6 (0.024)         T₁ max.       0.1 (0.004)         K₀       0.80 ± 0.15 (0.004)         Leader min.       390 (15.35)         Trailer min.       160 (5.30)         Reel Dimensions         Amax.       1.85 (7.28)         N min.       50 (1.97)         W₁       8.4 ± 1.5 t-0.0 (0.31 ± 0.006)         W₁       8.4 ± 1.5 t-0.0 (0.31 ± 0.006)	A <sub>0</sub>	
BO       (0.140 ± 0.004)         B₁ max.       4.35 (0.711)         D₀       1.5 + 0.10 0.00 (0.059 + 0.004/o)         F       3.5 ± 0.05 (0.138 ± 0.002)         E₁       1.75 ± 0.10 (0.069 ± 0.004)         E₂ min.       6.25 (0.246)         T max.       0.6 (0.024)         T₁ max.       0.1 (0.004)         K₀       (0.004)         Leader min.       390 (1.55)         Trailer min.       160 (6.30)         Reel Dimensions       160 (6.30)         A max.       1.85 (7.28)         N min.       50 (1.97)         W₁       8.4 + 1.5/-0.0 (0.31 + 0.050/-0.0)         Mompay       1.4.4		
B1 flax.         (0.171)           D0         1.5 ± 0.10√.0           F         3.5 ± 0.05           (0.138 ± 0.002)         1.75 ± 0.10           E1         (0.069 ± 0.004)           E2 min.         6.25           T max.         0.6           (0.024)         1.71 max.           K0         0.80 ± 0.15           (0.004)         (0.004)           K0         0.80 ± 0.15           (0.031 ± 0.006)         (0.31 ± 0.006)           Reel Dimensions         160           Reel Dimensions         185           N min.         50           (1.97)           W1         8.4 ± 1.5/-0.0           (0.331 ± 0.059/-0.0)           14.4	В <sub>0</sub>	
DO       1.5 + 0.10 / -0.0         F       3.5 ± 0.05         E1       1.75 ± 0.10         E2 min.       (0.069 ± 0.004)         T max.       6.25         (0.246)       (0.244)         T max.       0.1         (0.004)       0.80 ± 0.15         (0.004)       (0.004)         Ko       0.80 ± 0.15         (0.031 ± 0.006)       0.000         Leader min.       390         Trailer min.       160         (6.30)       (6.30)         Reel Dimensions         A max.       185         N min.       50         W1       8.4 + 1.5 / -0.0         (0.331 + 0.059/-0.0)         14.4	B₄ max	
□0     (0.059 + 0.004/0)       F     3.5 ± 0.05       E1     1.75 ± 0.10       (0.069 ± 0.004)       E2 min.     6.25       T max.     0.6       T max.     0.1       (0.024)     0.004)       K0     0.80 ± 0.15       (0.031 ± 0.006)     0.00 ± 0.15       Leader min.     390       Trailer min.     160       (6.30)     6.30)       Reel Dimensions       A max.     185       N min.     50       (19.7)     1.00       W1     8.4 ± 1.5/-0.0       (0.331 ± 0.059/-0.0)     14.4	- max.	
F     \$3.5±0.05 (0.138±0.002)       E1     \$1.75±0.10 (0.069±0.004)       E2 min.     6.25 (0.246)       T max.     0.6 (0.024)       T1 max.     0.1 (0.004)       K0     \$0.80±0.15 (0.031±0.006)       Leader min.     \$390 (0.031±0.006)       Trailer min.     \$6.30)       Reel Dimensions       A max.     \$185 (7.28)       N min.     \$50 (1.97)       W1     \$8.4±1.5/-0.0 (0.331±0.005)-0.0)       W0 may     \$14.4	$D_O$	
F       (0.138 ± 0.002)         E1       1.75 ± 0.10         E2 min.       6.25         (0.246)       6.06         T max.       0.1         K0       0.80 ± 0.15         (0.031 ± 0.006)       0.000         Leader min.       390         Trailer min.       160         (6.30)       6.30)         Reel Dimensions       185         N min.       50         (1.97)       0.00         W1       8.4 + 1.5/-0.0         Mormory       14.4	0	
$E_1$ $\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$ $E_2$ min. $\frac{6.25}{(0.246)}$ $T_{max}$ . $\frac{0.6}{(0.024)}$ $T_1$ max. $\frac{0.1}{(0.004)}$ $K_0$ $\frac{0.80 \pm 0.15}{(0.031 \pm 0.006)}$ Leader min. $\frac{390}{(15.35)}$ Trailler min. $\frac{160}{(6.30)}$ Reel Dimensions $\frac{185}{(7.28)}$ N min. $\frac{50}{(1.97)}$ W1 $\frac{8.4 + 1.5/-0.0}{(0.331 + 0.059/-0.0)}$ W4 max. $\frac{14.4}{(0.331 + 0.059/-0.0)}$	F	
E1     (0.069 ± 0.004)       E2 min.     6.25       T max.     0.6       T <sub>1</sub> max.     0.1       K <sub>0</sub> 0.80 ± 0.15       (0.031 ± 0.006)       Leader min.     390       Trailer min.     160       (6.30)     (6.30)       Reel Dimensions       N min.     50       (1.97)       W1     8.4 ± 1.5/-0.0       (0.331 ± 0.059/-0.0)       14.4		
E2 min.         6.25 (0.246)           T max.         0.6 (0.024)           T1 max.         0.1 (0.004)           K0         0.80 ± 0.15 (0.031 ± 0.006)           Leader min.         390 (15.35)           Trailer min.         160 (6.30)           Reel Dimensions           A max.         185 (7.28)           N min.         50 (1.97)           W1         8.4 + 1.5/-0.0 (0.331 + 0.059/-0.0)           W4 may         14.4	E <sub>1</sub>	
E2 IIIII. $\boxed{0.246}$ T max. $\boxed{0.024}$ $T_1$ max. $\boxed{0.004}$ $K_0$ $\boxed{0.80 \pm 0.15}$ $\boxed{(0.031 \pm 0.006)}$ Leader min. $\boxed{390}$ $\boxed{(15.35)}$ Trailer min. $\boxed{160}$ Reel Dimensions         A max. $\boxed{185}$ N min. $\boxed{50}$ $\boxed{(1.97)}$ $\boxed{0.331 + 0.059/-0.0}$ We may $\boxed{14.4}$		
I max. $0.1$ $T_1$ max. $0.1$ $K_0$ $0.80 \pm 0.15$ Leader min. $0.80 \pm 0.15$ Trailer min. $0.80 \pm 0.15$ Trailer min. $0.80 \pm 0.15$ Reel Dimensions $0.80 \pm 0.15$ A max. $0.80 \pm 0.15$ N min. $0.80 \pm 0.15$ W1 $0.80 \pm 0.15$ Wa may. $0.80 \pm 0.15$ <t< td=""><td>E<sub>2</sub> min.</td><td>(0.246)</td></t<>	E <sub>2</sub> min.	(0.246)
T₁ max.     0.1 (0.004)       K₀     0.80 ± 0.15 (0.031 ± 0.006)       Leader min.     390 (15.35)       Trailer min.     160 (6.30)       Reel Dimensions       A max.     185 (7.28)       N min.     50 (1.97)       W₁     8.4 + 1.5/-0.0 (0.331 + 0.059/-0.0)       Wo may     14.4	T max.	
$11 \text{ max.}$ $\overline{(0.004)}$ $K_0$ $\frac{0.80 \pm 0.15}{(0.031 \pm 0.006)}$ Leader min. $\frac{390}{(15.35)}$ Trailer min. $\frac{160}{(6.30)}$ Reel Dimensions       A max. $\frac{185}{(7.28)}$ N min. $\frac{50}{(1.97)}$ W <sub>1</sub> $\frac{8.4 + 1.5/-0.0}{(0.331 + 0.059/-0.0)}$ W <sub>2</sub> may $\frac{14.4}{(0.001 + 0.001)}$		
$K_0$	T <sub>1</sub> max.	
NO     (0.031 ± 0.006)       Leader min.     390 (15.35)       Trailer min.     160 (6.30)       Reel Dimensions       A max.     185 (7.28)       N min.     50 (1.97)       W1     8.4 + 1.5/-0.0 (0.331 + 0.059/-0.0)       Wa max.     14.4		
Leader Milh.     (15.35)       Trailer min.     160 (6.30)       Reel Dimensions       A max.     185 (7.28)       N min.     50 (1.97)       W <sub>1</sub> 8.4 + 1.5/-0.0 (0.331 + 0.059/-0.0)       We may:     14.4	κ <sub>0</sub>	$\overline{(0.031 \pm 0.006)}$
Trailer min.     160 (6.30)       Reel Dimensions     185 (7.28)       N min.     50 (1.97)       W1     8.4 + 1.5/-0.0 (0.331 + 0.059/-0.0)       Wa max.     14.4	Leader min	
Trailer min.         (6.30)           Reel Dimensions           A max.         185 (7.28)           N min.         50 (1.97)           W <sub>1</sub> 8.4 + 1.5/-0.0 (0.331 + 0.059/-0.0)           Wo max         14.4	Leader Hills.	
Reel Dimensions       A max.     185 / (7.28)       N min.     50 / (1.97)       W1     8.4 + 1.5/-0.0 / (0.331 + 0.059/-0.0)       Wo max     14.4	Trailer min.	
A max. $ \frac{185}{(7.28)} $ N min. $ \frac{50}{(1.97)} $ W <sub>1</sub> $ \frac{8.4 + 1.5/-0.0}{(0.331 + 0.059/-0.0)} $	Deal Disconsisses	(0.50)
A max.         (7.28)           N min.         \$\frac{50}{(1.97)}\$           W1         \$\frac{8.4 + 1.5/-0.0}{(0.331 + 0.059/-0.0)}\$           Wa max.         \$\frac{14.4}{14.4}\$	Reel Dimensions	
N min. $ \frac{50}{(1.97)} $ W1 $ \frac{8.4 + 1.5/-0.0}{(0.331 + 0.059/-0.0)} $ W2 max $ \frac{14.4}{(0.331 + 0.059/-0.0)} $	A max.	
	N min.	50
(0.331 + 0.059/-0.0) We may		
We may 14.4	$W_1$	$\frac{8.4 + 1.5/-0.0}{(0.331 + 0.059/-0.0)}$
	W- mov	
	w2 max.	

-D0+ -P2-COVER Ė<sub>2</sub> w



MM (INCHES)

DIMENSIONS:

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