

GENERAL INFORMATION

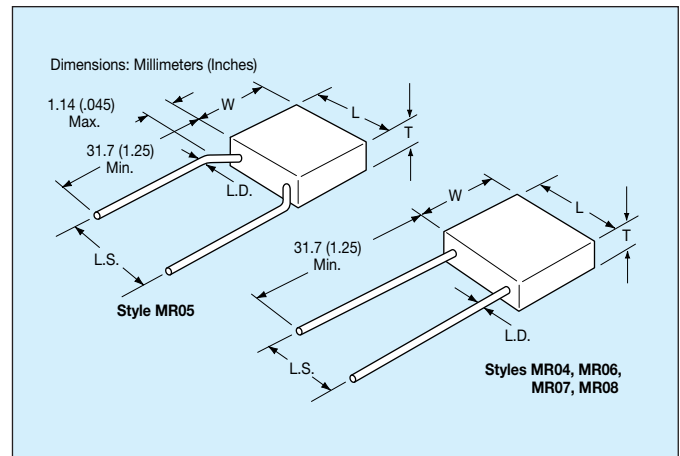
AVX MR Series

Molded Radial Leaded MLC

Temperature Coefficients: C0G (NP0), X7R, Z5U
50, 100, 200 Volts

Case Material: Molded Epoxy

Lead Material: Solderable



HOW TO ORDER

MR05	1	A	561	J	A	A
AVX Style MR04 MR05 MR06 MR07 MR08	Voltage 5 = 50V 1 = 100V 2 = 200V	Dielectric A = C0G (NP0) C = X7R E = Z5U	Capacitance First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros. For example, order 100,000 pF as 104. (For values below 10pF use "R" in place of decimal point, e.g., 1R4 = 1.4pF)	Capacitance Tolerance C0G (NP0): D = $\pm 5\text{pF}$ ($>10\text{pF}$ only) F = $\pm 1\%$ ($>50\text{pF}$ only) G = $\pm 2\%$ ($>25\text{pF}$ only) J = $\pm 5\%$ K = $\pm 10\%$ X7R: J = $\pm 5\%$ K = $\pm 10\%$ M = $\pm 20\%$ Z5U: M = $\pm 20\%$ Z = $+80\%$ -20%	Failure Rate A = Not Applicable T = CECC	Leads A = Standard Solderable (SnPb) T* = Trimmed Leads .230" $\pm$.030"

* Trimmed lead length for the MR05 style will be measured from the bend in the lead (seating plane).

MARKING

Marking is as size permits.
(For code identification, see HOW TO ORDER section.)

- AVX
- Capacitance Tolerance
- Voltage Rating
- Temperature Coefficient
- Date Code
- Lot Code

PACKAGING REQUIREMENTS

Bulk Packaging: 1000 pcs. per sealed package except MR07/MR08 (300 pcs.).

Tape and Reel: Available on MR04, MR05, and MR06 only (2500 pcs./reel).

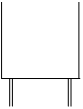
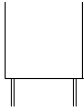
Ammo Packaging: Available on special request.

Radial Leads/Ceralam®



C0G (NP0)

SIZE AND CAPACITANCE SPECIFICATIONS



Dimensions: Millimeters (Inches)

AVX Style		MR04			MR05			MR06			MR07			MR08		
Length*		4.83 (.190")			4.83 (.190")			7.36 (.290")			12.44 (.490")			12.44 (.490")		
Width*		4.83 (.190")			4.83 (.190")			7.36 (.290")			12.44 (.490")			12.44 (.490")		
Thickness*		2.28 (.090")			2.28 (.090")			2.28 (.090")			3.55 (.140")			6.09 (.240")		
Lead Spacing*		2.54 (.100")			5.08 (.200")			5.08 (.200")			10.16 (.400")			10.16 (.400")		
Lead Diameter*		.635 (.025")			.635 (.025")			.635 (.025")			.635 (.025")			.635 (.025")		
Cap. in pF	Typical AVX Part Nos.	WVDC			WVDC			WVDC			WVDC			WVDC		
		200	100	50	200	100	50	200	100	50	200	100	50	200	100	50
1.0 to 9.1	MR____5A1R0DAA MR____5A9R1DAA															
10 to 15	MR____5A100KAA MR____5A120KAA MR____5A150KAA															
18 to 27	MR____5A180KAA MR____5A220KAA MR____5A270KAA															
33 to 47	MR____5A330KAA MR____5A390KAA MR____5A470KAA															
56 to 82	MR____5A560KAA MR____5A680KAA MR____5A820KAA															
100 to 150	MR____5A101KAA MR____5A121KAA MR____5A151KAA															
180 to 270	MR____5A181KAA MR____5A221KAA MR____5A271KAA															
330 to 470	MR____5A331KAA MR____5A391KAA MR____5A471KAA															
560 to 820	MR____5A561KAA MR____5A681KAA MR____5A821KAA															
1000 to 1500	MR____5A102KAA MR____5A122KAA MR____5A152KAA															
1800 to 2700	MR____5A182KAA MR____5A222KAA MR____5A272KAA															
3300 to 4700	MR____5A332KAA MR____5A392KAA MR____5A472KAA															
5600 to 8200	MR____5A562KAA MR____5A682KAA MR____5A822KAA															
10,000 to 15,000	MR____5A103KAA MR____5A123KAA MR____5A153KAA															
18,000 to 27,000	MR____5A183KAA MR____5A223KAA MR____5A273KAA															
33,000 to 47,000	MR____5A333KAA MR____5A393KAA MR____5A473KAA															
56,000 to 82,000	MR____5A563KAA MR____5A683KAA MR____5A823KAA															
100,000 to 150,000	MR____5A104KAA MR____5A124KAA MR____5A154KAA															

For trimmed leads see "How To Order".
For other tolerances see "How To Order".
For other voltages see "How To Order".

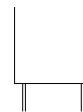
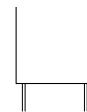
 = Industry preferred values

*Length, width and thickness dimensions are ± 0.254 mm (± 0.010 "). Lead diameter is ± 0.05 mm (± 0.002 "). Lead spacing is ± 0.381 mm (± 0.015 ").



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		200	100	50	200	100	50	200	100	50	200	100	50	200	100	50
100	MR____5C101KAA															
120	MR____5C121KAA															
150	MR____5C151KAA															
180	MR____5C181KAA															
220	MR____5C221KAA															
270	MR____5C271KAA															
330	MR____5C331KAA															
390	MR____5C391KAA															
470	MR____5C471KAA															
560	MR____5C561KAA															
680	MR____5C681KAA															
820	MR____5C821KAA															
1000	MR____5C102KAA															
1200	MR____5C122KAA															
1500	MR____5C152KAA															
1800	MR____5C182KAA															
2200	MR____5C222KAA															
2700	MR____5C272KAA															
3300	MR____5C332KAA															
3900	MR____5C392KAA															
4700	MR____5C472KAA															
5600	MR____5C562KAA															
6800	MR____5C682KAA															
8200	MR____5C822KAA															
10,000	MR____5C103KAA															
12,000	MR____5C123KAA															
15,000	MR____5C153KAA															
18,000	MR____5C183KAA															
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100,000	MR____5C104KAA															
120,000	MR____5C124KAA															
150,000	MR____5C154KAA															
180,000	MR____5C184KAA															
220,000	MR____5C224KAA															
270,000	MR____5C274KAA															
330,000	MR____5C334KAA															
390,000	MR____5C394KAA															
470,000	MR____5C474KAA															
560,000	MR____5C564KAA															
680,000	MR____5C684KAA															
820,000	MR____5C824KAA															
1.0 µF	MR____5C105KAA															
1.2 µF	MR____5C125KAA															
1.5 µF	MR____5C155KAA															
1.8 µF	MR____5C185KAA															
2.0 µF	MR____5C205KAA															
2.2 µF	MR____5C225KAA															
2.7 µF	MR____5C275KAA															
3.3 µF	MR____5C335KAA															
3.9 µF	MR____5C395KAA															
4.7 µF	MR____5C475KAA															

For trimmed leads see "How To Order".
For other tolerances see "How To Order".
For other voltages see "How To Order".

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Cap. in pF	Typical AVX Part Nos.	WVDC		WVDC	
		100	50	100	50
10,000	MR.....5E103ZAA				
12,000	MR.....5E123ZAA				
15,000	MR.....5E153ZAA				
18,000	MR.....5E183ZAA				
22,000	MR.....5E223ZAA				
27,000	MR.....5E273ZAA				
33,000	MR.....5E333ZAA				
39,000	MR.....5E393ZAA				
47,000	MR.....5E473ZAA				
56,000	MR.....5E563ZAA				
68,000	MR.....5E683ZAA				
82,000	MR.....5E823ZAA				
100,000	MR.....5E104ZAA				
120,000	MR.....5E124ZAA				
150,000	MR.....5E154ZAA				
180,000	MR.....5E184ZAA				
220,000	MR.....5E224ZAA				
270,000	MR.....5E274ZAA				
330,000	MR.....5E334ZAA				
390,000	MR.....5E394ZAA				
470,000	MR.....5E474ZAA				
560,000	MR.....5E564ZAA				
680,000	MR.....5E684ZAA				
820,000	MR.....5E824ZAA				
1.0 µF	MR.....5E105ZAA				
1.2 µF	MR.....5E125ZAA				
1.5 µF	MR.....5E155ZAA				
1.8 µF	MR.....5E185ZAA				
2.2 µF	MR.....5E225ZAA				
2.7 µF	MR.....5E275ZAA				
3.3 µF	MR.....5E335ZAA				
3.9 µF	MR.....5E395ZAA				
4.7 µF	MR.....5E475ZAA				
5.6 µF	MR.....5E565ZAA				
6.8 µF	MR.....5E685ZAA				
8.2 µF	MR.....5E825ZAA				
10.0 µF	MR.....5E106ZAA				

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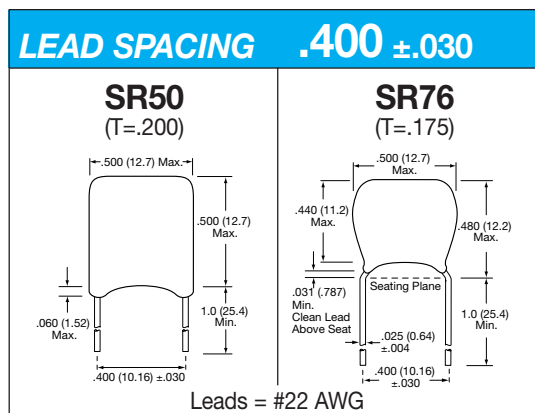
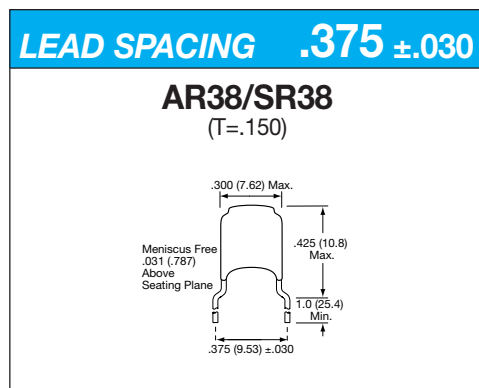
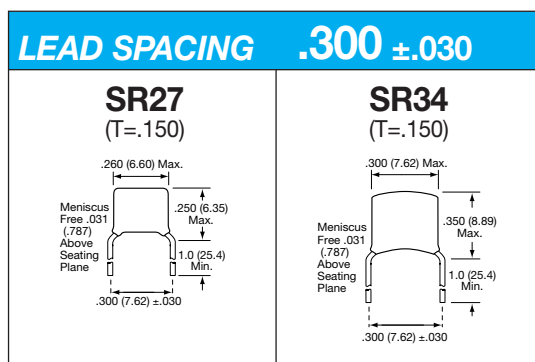
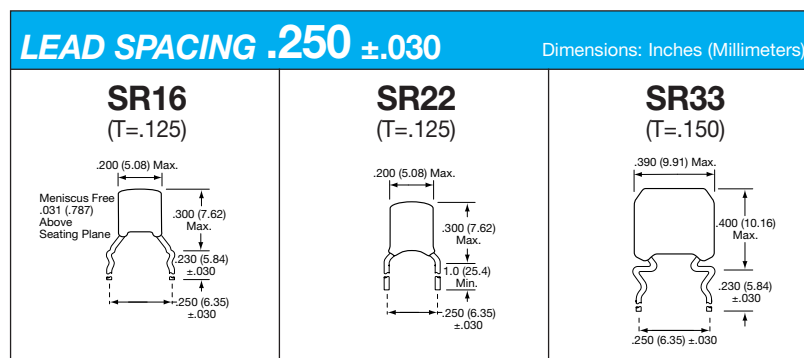
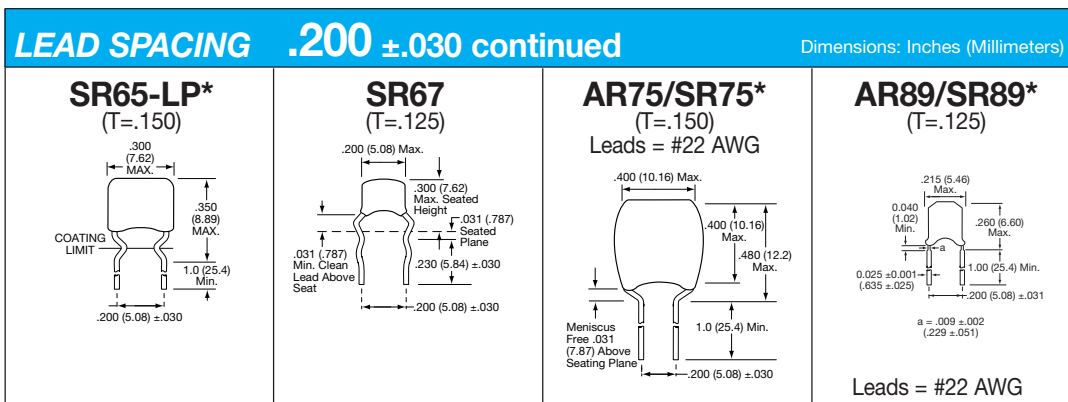
Configurations by Lead Spacing

LEAD SPACING $.100 \pm .030$				Dimensions: Inches (Millimeters)
AR07/SR07* (T=.100) 	AR14/SR14 (T=.100) 	AR15/SR15* (T=.100) 	AR20/SR20* (T=.125) 	
AR29/SR29* (T=.125) 	AR62/SR62* (T=.125) 	SR62-LP* (T=.100) 	Leads = #22 AWG	

LEAD SPACING $.200 \pm .030$					Dimensions: Inches (Millimeters)
AR12/SR12* (T=.100) 	SR13* (T=.125) 	AR21/SR21* (T=.125) 	SR21-85* (T=.125) 	SR28* (T=.125) 	
AR30/SR30* (T=.150) 	SR30-LP* (T=.150) 	AR32/SR32* (T=.150) 	AR40/SR40* (T=.150) 	AR59/SR59* (T=.125) 	
SR61 (T=.150) 	SR63* (T=.150) 	SR64* (T=.150) 	SR64-LP* (T=.150) 	AR65/SR65* (T=.150) 	Leads = #22 AWG

*SL style available in all SR configurations.

Configurations by Lead Spacing



- NOTES:**
1. All leads are #24 AWG unless otherwise noted.
 2. Available in tape and reel packaging(*).
 3. Other styles are also available, contact factory.
 4. (T = XXX) under type designation is maximum thickness in inches.

*SL style available in all SR configurations.

Radial Leads/Packaging

Tape and Reel



GENERAL INFORMATION

1. Standard reel diameter is 355 millimeters (14 inches) maximum.
2. Reeling standard (#1 or #2) should be specified when ordering.

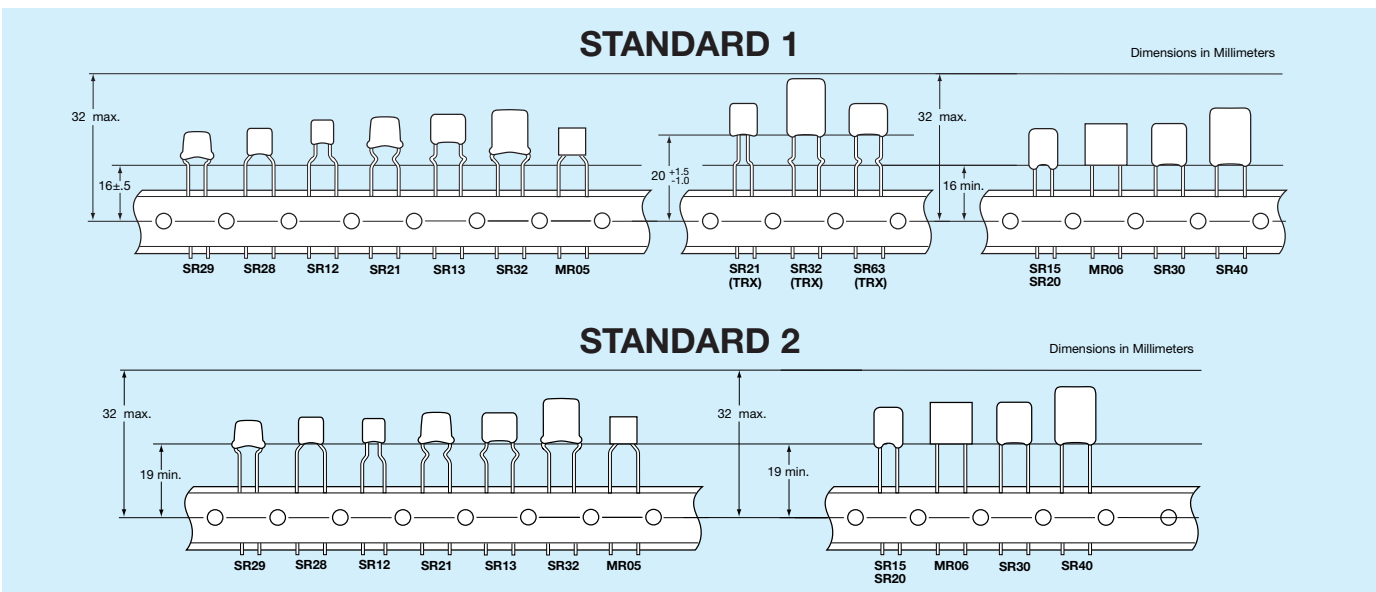
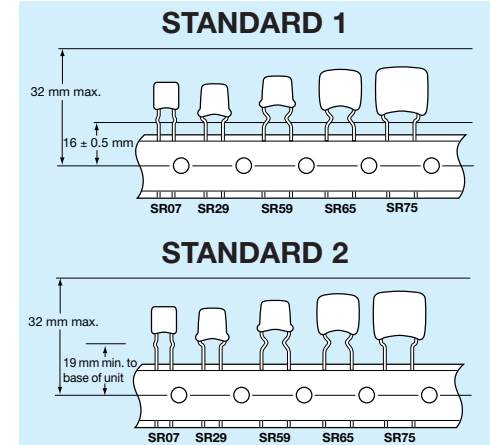
HOW TO ORDER

To specify tape and reel packaging, add TR1, TR2 or TRX to the end of the AVX 12 digit part number.

Examples:

SR215C104KARTR1
SR305E105MARTR2
SR215C103JARTRX

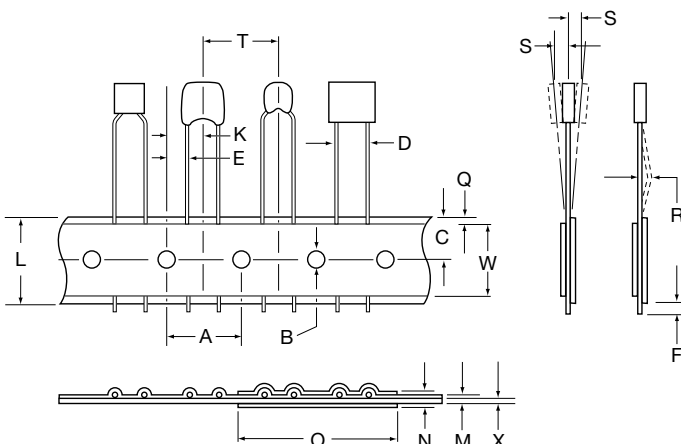
THE INSERTABLES



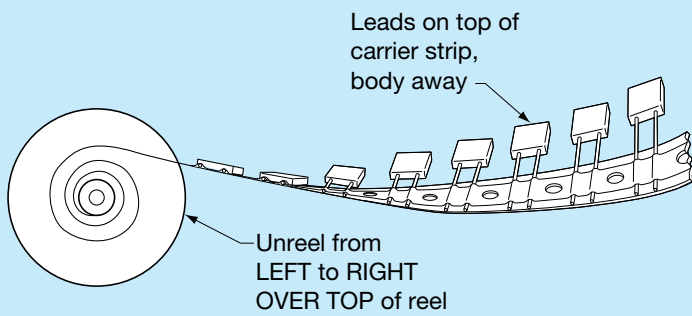
DESCRIPTION

DIMENSIONS (MM)

A. Feed Hole Pitch	12.70 ± .20
B. Feed Hole Diameter	3.99 ± .20
C. Feed Hole Location	9.02 ± .51
D. Component Lead Spacing	5.00 ^{+.79} _{-.20} or 2.54 ^{+.79} _{-.20}
E. Component Lead Location	3.81 ± .51 or 5.00 ± .51 for 2.54 lead spacing
F. Component Lead Protrusion (edge of carrier to cut end of lead)	2.00 maximum
K. Component Body Location	6.35 ± .41
L. Carrier Tape Width	18.01 ^{+1.02} _{-.51}
M. Carrier Tape Assembly Thickness	.71 ± .20
N. Carrier Tape Spliced Thickness	1.42 maximum
O. Carrier Tape Spliced Length	50.80 - 88.90
Q. Adhesive Tape Border	3.00 maximum
R. Component Bent Leads (either direction)	.79 maximum
S. Component Misalignment	.99 maximum
T. Component Pitch	12.70 ± .99
W. Adhesive Tape Width	5.00 minimum
X. Carrier Tape Thickness	.51 ± .10
Y. Cumulative Pitch over 20 Pitches	254 ± 2.00



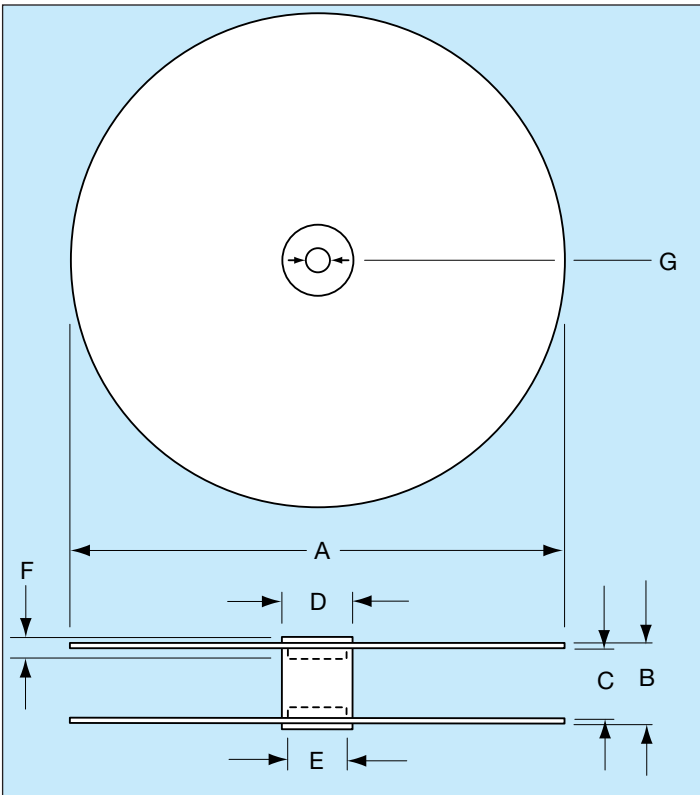
REEL DIRECTION



QUANTITY PER REEL SR/AR

PART	PCS
SR15, 07, 12	3500
SR20, 21, 23, 28 13, 29, 59, 62, 89	3000
SR30, 32, 40, 63, 64 65, 75	2000
MR05, 06	2500

*SL style available in all SR configurations.



DESCRIPTION

A – Reel Diameter
 B – Reel Outside Width
 C – Reel Inside Width
 D – Core Diameter (O.D.)
 E – Hub Recess Diameter
 F – Hub Recess Depth
 G – Arbor Hole Diameter

DIMENSIONS (MM)

304.80 - 355
 50.80 maximum
 38.10 - 46.02
 102.01 maximum
 86.36 maximum
 9.50 minimum
 25.40 - 30.48

CONVERSION TABLE

MM	IN	MM	IN	MM	IN	MM	IN	MM	IN
.10	.004	1.52	.060	5.00	.197	9.91	.390	32.00	1.260
.20	.007	2.00	.079	5.08	.200	10.03	.395	38.10	1.500
.38	.015	2.54	.100	6.22	.245	10.16	.400	46.02	1.812
.41	.016	3.00	.118	6.35	.250	11.68	.460	50.80	2.000
.51	.020	3.18	.125	6.60	.260	12.50	.492	86.36	3.400
.71	.028	3.48	.137	6.99	.275	12.70	.500	88.90	3.500
.79	.031	3.81	.150	7.62	.300	16.00	.630	102.01	4.016
.99	.039	3.99	.157	8.89	.350	18.01	.709	254.00	10.000
1.02	.040	4.45	.175	9.02	.355	25.40	1.000	304.80	12.000
1.42	.056	4.98	.196	9.50	.374	30.48	1.200	355.00	14.000

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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