

# DATA·LOG

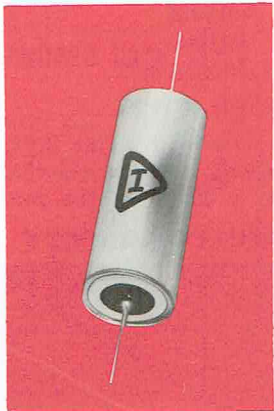
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## HOPKINS *Engineering* COMPANY

AUGUST 1958

NO. C-103 A

### METALLIZED MYLAR\* FILM CAPACITORS



**INTRODUCTION** — HOPKINS ENGINEERING COMPANY'S metallized mylar film capacitors are used in both military and commercial applications. These units are available in hermetically sealed brass tubes, bathtubs and film wrapped units. The latter are endfilled with a high grade plastic dielectric. These metallized mylar units possess the same outstanding characteristics of mylar and foil units and are considerably smaller in physical size. This size has not sacrificed quality in the electrical characteristics such as insulation resistance and operating temperatures. These units are highly suited for both exposed and encapsulated circuitry.

**CONSTRUCTION** — Our metallized mylar capacitors are constructed with the highest quality material available and produced under rigid quality control processes to assure maximum capabilities and minimum size.

**TEMPERATURE** — Metallized mylar capacitors will operate from  $-55^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$  without derating and may be operated up to  $125^{\circ}\text{C}$  with a 50% voltage derating.

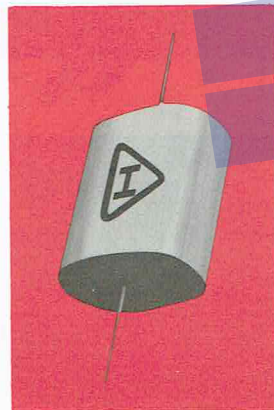
**POWER FACTOR** — The power factor shall not exceed 1% when measured at 1,000 cycles at  $25^{\circ}\text{C}$ .

**INSULATION RESISTANCE** — Will equal or exceed the values given below.

Temp.	IR Megohms X MFD	IR in Megohms need not exceed
$25^{\circ}\text{C}$	50,000	100,000
$85^{\circ}\text{C}$	5,000	10,000
$125^{\circ}\text{C}$	100	200

**CAPACITANCE TOLERANCE** — Standard tolerance is  $\pm 20\%$ . Closer tolerances down to 5% are available upon request. This tolerance is measured at or referred to at 1,000 cycles and  $25^{\circ}\text{C}$ .

**CAPACITANCE STABILITY** — Metallized mylar capacitors have a temperature change of  $-6\%$  from  $+25^{\circ}\text{C}$  to  $-55^{\circ}\text{C}$ , a  $+6\%$  from  $+25^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ , a  $+15\%$  from  $+25^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

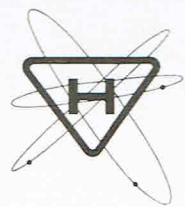


**DIELECTRIC STRENGTH** — These units will withstand an application of voltage between terminals for a period not to exceed 2 minutes at 175% of the rated voltage at  $25^{\circ}\text{C}$ .

**LIFE TEST** — These units will withstand 140% of the rated voltage for 250 hours at  $100^{\circ}\text{C}$ . Surge current should be limited to 5 milliamperes.

**TERMINALS AND MOUNTING** — Metallized mylar units are available in all the various case styles and bathtubs. The standard hermetically sealed tubular and wrapped units shall have copperweld wire leads of axial construction with a dimension of  $1\frac{1}{8}$  inches long,  $-0 + 1$  inch. Flexible leads are also available.

\*Dupont's registered trade name.

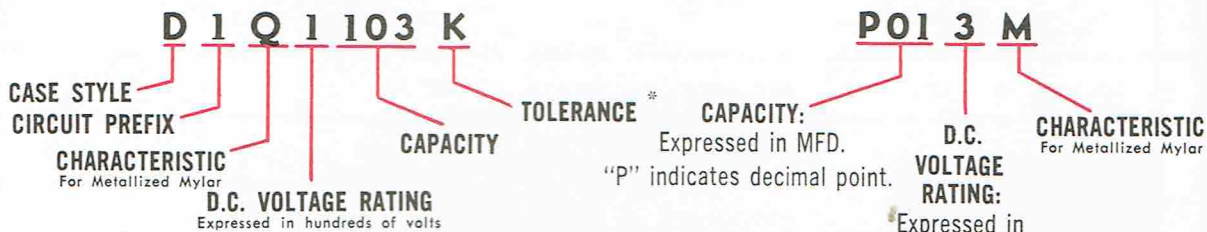


# METALLIZED MYLAR

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## Catalog Numbering System

EXAMPLE:

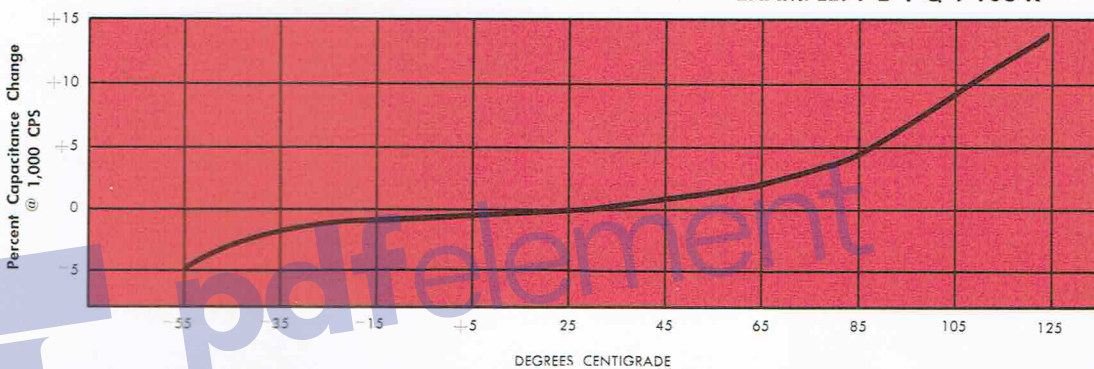


\* TOLERANCE

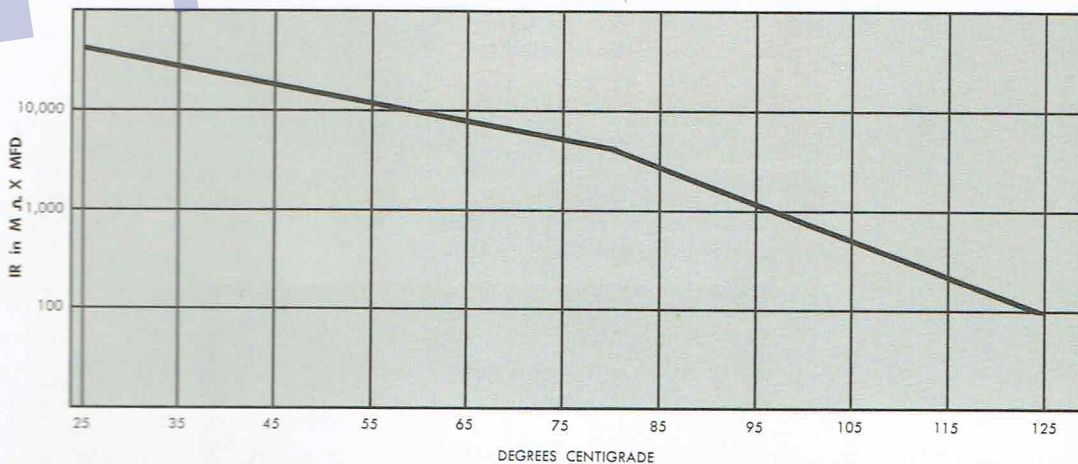
None	.....	±20%
Letter "K"	.....	±10%
Letter "C"	.....	± 5%

Standard case style and styles B, C, and D available with insulated sleeving by adding 9 as a prefix to the part number  
**EXAMPLE: 9 D 1 Q 1 103 K**

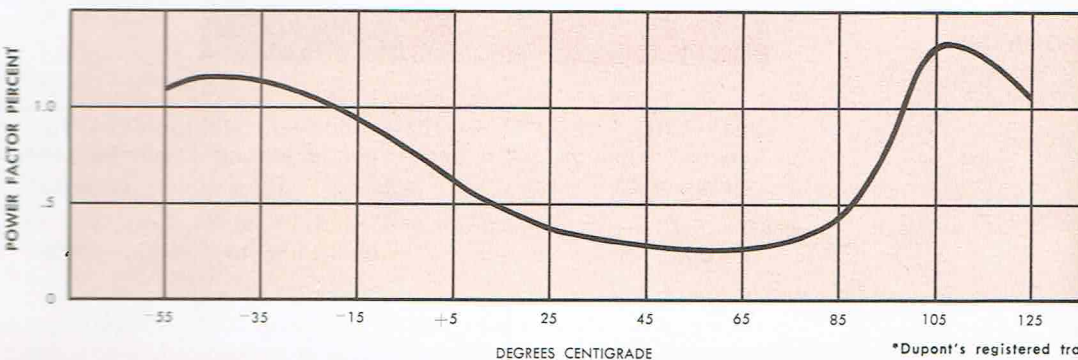
**CAPACITANCE VS TEMPERATURE**



**INSULATION RESISTANCE VS TEMPERATURE**



**POWER FACTOR VS TEMPERATURE**



\*Dupont's registered trade name



# FILM CAPACITORS

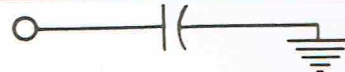
## CASE STYLES

### CIRCUIT DESIGNATIONS

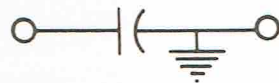
1. FLOATING CASE  
(Standard)



2. GROUNDED CASE  
(No ground lead)



3. GROUNDED CASE  
(With ground lead)

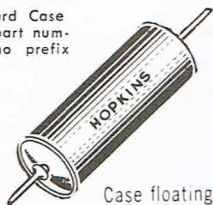


8. FEED THRU

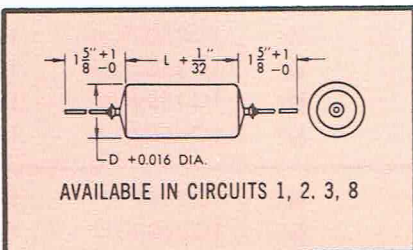


### STANDARD CASE STYLE

For Standard Case  
Use basic part number  
with no prefix



Case floating



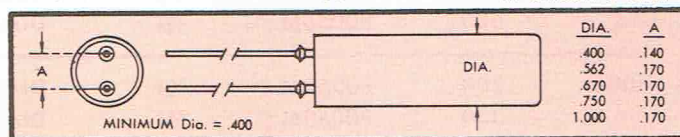
AVAILABLE IN CIRCUITS 1, 2, 3, 8

Available with sleeving by adding 9 to prefix  
case style.

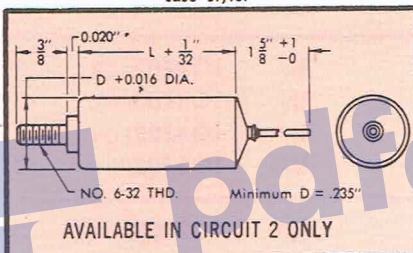
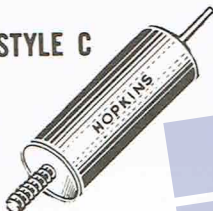
### CASE STYLE B



AVAILABLE  
IN CIRCUIT 1 ONLY



### CASE STYLE C

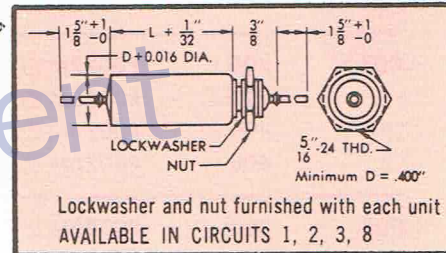


AVAILABLE IN CIRCUIT 2 ONLY

### CASE STYLE D



Case floating

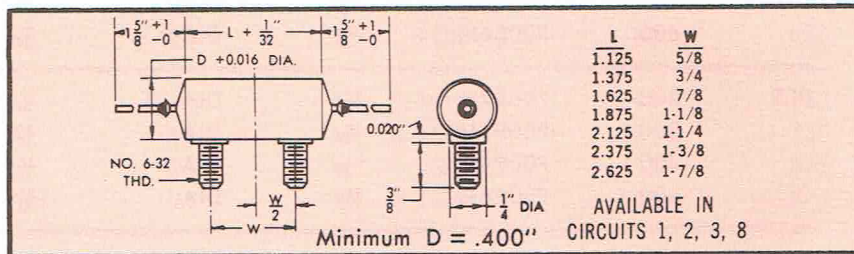


Lockwasher and nut furnished with each unit  
AVAILABLE IN CIRCUITS 1, 2, 3, 8

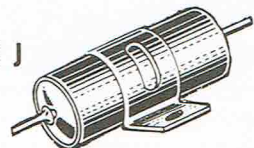
### CASE STYLE E



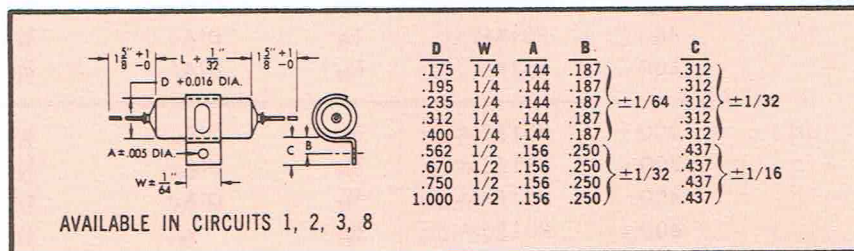
Case floating



### CASE STYLE J



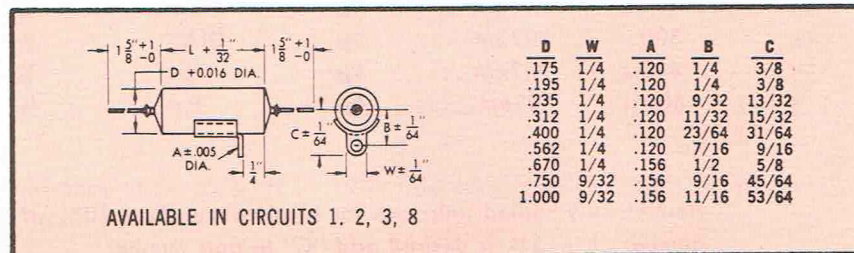
Case floating

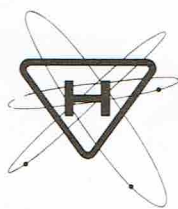


### CASE STYLE L



Case floating





# METALLIZED MYLAR

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CAP.	VOLTS	PART NO.	WRAPPED UNITS			HERMETICALLY SEALED		
			T ± 1/32	W ± 1/32	L ± 1/32	PART NO.	DIA.	LGTH.
.005	200	P0052M	3/16	DIA.	3/4	1Q2502	.175	.750
	300	P0053M	3/16	DIA.	3/4	1Q3502	.175	.750
	400	P0054M	3/16	DIA.	3/4	1Q4502	.175	.750
	600	P0056M	3/16	DIA.	3/4	1Q6502	.175	.750
.006	200	P0062M	3/16	DIA.	3/4	1Q2602	.175	.750
	300	P0063M	3/16	DIA.	3/4	1Q3602	.175	.750
	400	P0064M	3/16	DIA.	3/4	1Q4602	.175	.750
	600	P0066M	3/16	DIA.	3/4	1Q6602	.175	.750
.007	200	P0072M	3/16	DIA.	3/4	1Q2702	.175	.750
	300	P0073M	3/16	DIA.	3/4	1Q3702	.175	.750
	400	P0074M	3/16	DIA.	3/4	1Q4702	.175	.750
	600	P0076M	3/16	DIA.	3/4	1Q6702	.195	.750
.008	200	P0082M	3/16	DIA.	3/4	1Q2802	.175	.750
	300	P0083M	3/16	DIA.	3/4	1Q3802	.175	.750
	400	P0084M	3/16	DIA.	3/4	1Q4802	.175	.750
	600	P0086M	3/16	DIA.	3/4	1Q6802	.235	.750
.009	200	P0092M	3/16	DIA.	3/4	1Q2902	.175	.750
	300	P0093M	3/16	DIA.	3/4	1Q3902	.175	.750
	400	P0094M	3/16	DIA.	3/4	1Q4902	.175	.750
	600	P0096M	3/16	DIA.	3/4	1Q6902	.235	.750
.01	200	P012M	3/16	DIA.	3/4	1Q2103	.175	.750
	300	P013M	3/16	DIA.	3/4	1Q3103	.175	.750
	400	P014M	3/16	DIA.	3/4	1Q4103	.175	.750
	600	P016M	3/16	DIA.	3/4	1Q6103	.235	.750
.015	200	P0152M	3/16	DIA.	3/4	1Q2153	.175	.750
	300	P0153M	3/16	DIA.	3/4	1Q3153	.175	.750
	400	P0154M	3/16	DIA.	3/4	1Q4153	.175	.750
	600	P0156M	5/32	1/4	3/4	1Q6153	.312	.875
.02	200	P022M	3/16	DIA.	3/4	1Q2203	.175	.750
	300	P023M	3/16	DIA.	3/4	1Q3203	.175	.750
	400	P024M	5/32	1/4	3/4	1Q4203	.235	.750
	600	P026M	7/32	5/16	7/8	1Q6203	.312	.875

Hermetically sealed units are for a tolerance of ± 20%, if ± 10% tolerance is desired add "K" to part number, if ± 5% is desired add "C" to part number.



# FILM CAPACITORS

CAP.	VOLTS	PART NO.	WRAPPED UNITS			HERMETICALLY SEALED		
			T ± 1/32	W ± 1/32	L ± 1/32	PART NO.	DIA.	LGTH.
.022	200	P0222M	3/16	DIA.	3/4	1Q2223	.175	.750
	300	P0223M	3/16	DIA.	3/4	1Q3223	.175	.750
	400	P0224M	5/32	1/4	3/4	1Q4223	.235	.750
	600	P0226M	7/32	5/16	7/8	1Q6223	.312	.875
.03	200	P032M	3/16	DIA.	3/4	1Q2303	.175	.750
	300	P033M	3/16	DIA.	3/4	1Q3303	.195	.750
	400	P034M	5/32	1/4	3/4	1Q4303	.312	.875
	600	P036M	1/4	11/32	7/8	1Q6303	.400	.875
.033	200	P0332M	3/16	DIA.	3/4	1Q2333	.175	.750
	300	P0333M	3/16	DIA.	3/4	1Q3333	.195	.750
	400	P0334M	5/32	1/4	3/4	1Q4333	.312	.875
	600	P0336M	1/4	11/32	7/8	1Q6333	.400	.875
.04	200	P042M	3/16	DIA.	3/4	1Q2403	.175	.750
	300	P043M	5/32	1/4	3/4	1Q3403	.235	.750
	400	P044M	3/16	9/32	3/4	1Q4403	.312	.875
	600	P046M	5/16	13/32	7/8	1Q6403	.400	.875
.047	200	P0472M	3/16	DIA.	3/4	1Q2473	.195	.750
	300	P0473M	5/32	1/4	3/4	1Q3473	.235	.750
	400	P0474M	7/32	9/32	3/4	1Q4473	.312	.875
	600	P0476M	11/32	13/32	7/8	1Q6473	.400	.875
.05	200	P052M	3/16	DIA.	3/4	1Q2503	.195	.750
	300	P053M	5/32	1/4	3/4	1Q3503	.235	.750
	400	P054M	7/32	5/16	3/4	1Q4503	.312	.875
	600	P056M	7/32	3/8	1 1/8	1Q6503	.400	1.125
.06	200	P062M	3/16	DIA.	3/4	1Q2603	.195	.750
	300	P063M	5/32	7/32	3/4	1Q3603	.312	.875
	400	P064M	7/32	5/16	3/4	1Q4603	.400	.875
	600	P066M	5/16	13/32	1 1/8	1Q6603	.400	1.125
.07	200	P072M	3/16	DIA.	3/4	1Q2703	.235	.750
	300	P073M	5/32	1/4	3/4	1Q3703	.312	.875
	400	P074M	7/32	5/16	3/4	1Q4703	.400	.875
	600	P076M	11/32	7/16	1 1/8	1Q6703	.400	1.125

Hermetically sealed units are for a tolerance of ± 20%, if ± 10% tolerance is desired add "K" to part number, if ± 5% is desired add "C" to part number.



# METALLIZED MYLAR

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CAP.	VOLTS	PART NO.	WRAPPED UNITS			HERMETICALLY SEALED		
			T ± 1/32	W ± 1/32	L ± 1/32	PART NO.	DIA.	LGTH.
.08	200	P082M	3/16	DIA.	3/4	1Q2803	.235	.875
	300	P083M	5/32	1/4	3/4	1Q3803	.312	.875
	400	P084M	7/32	5/16	3/4	1Q4803	.400	.875
	600	P086M	11/32	7/16	1 1/8	1Q6803	.500	1.125
.09	200	P092M	3/16	DIA.	3/4	1Q2903	.235	.875
	300	P093M	5/32	1/4	3/4	1Q3903	.312	.875
	400	P094M	7/32	5/16	3/4	1Q4903	.400	.875
	600	P096M	11/32	15/32	1 1/8	1Q6903	.500	1.125
.10	200	P12M	5/32	7/32	3/4	1Q2104	.312	.875
	300	P13M	7/32	5/16	3/4	1Q3104	.312	.875
	400	P14M	5/16	13/32	3/4	1Q4104	.400	.875
	600	P16M	5/16	1/2	1 1/8	1Q6104	.500	1.125
.20	200	P22M	7/32	5/16	3/4	1Q2204	.312	.875
	300	P23M	5/16	13/32	3/4	1Q3204	.400	.875
	400	P24M	5/16	15/32	1 1/8	1Q4204	.500	1.125
	600	P26M	7/16	19/32	1 5/16	1Q6204	.562	1.312
.22	200	P222M	1/4	11/32	3/4	1Q2224	.312	.875
	300	P223M	1/4	3/8	1 1/8	1Q3224	.400	1.125
	400	P224M	5/16	1/2	1 1/8	1Q4224	.500	1.125
	600	P226M	11/32	17/32	1 7/8	1Q6224	.562	1.875
.25	200	P252M	1/4	11/32	3/4	1Q2254	.400	.875
	300	P253M	7/32	3/8	1 1/8	1Q3254	.400	1.125
	400	P254M	5/16	15/32	1 5/16	1Q4254	.500	1.312
	600	P256M	3/8	17/32	1 7/8	1Q6254	.562	1.875
.30	200	P32M	9/32	3/8	3/4	1Q2304	.400	.875
	300	P33M	1/4	13/32	1 1/8	1Q3304	.400	1.125
	400	P34M	11/32	1/2	1 5/16	1Q4304	.500	1.312
	600	P36M	13/32	9/16	1 7/8	1Q6304	.562	1.875
.40	200	P42M	11/32	13/32	3/4	1Q2404	.400	.875
	300	P43M	5/16	15/32	1 1/8	1Q3404	.500	1.125
	400	P44M	13/32	9/16	1 5/16	1Q4404	.562	1.312
	600	P46M	1/2	21/32	1 7/8	1Q6404	.670	1.875

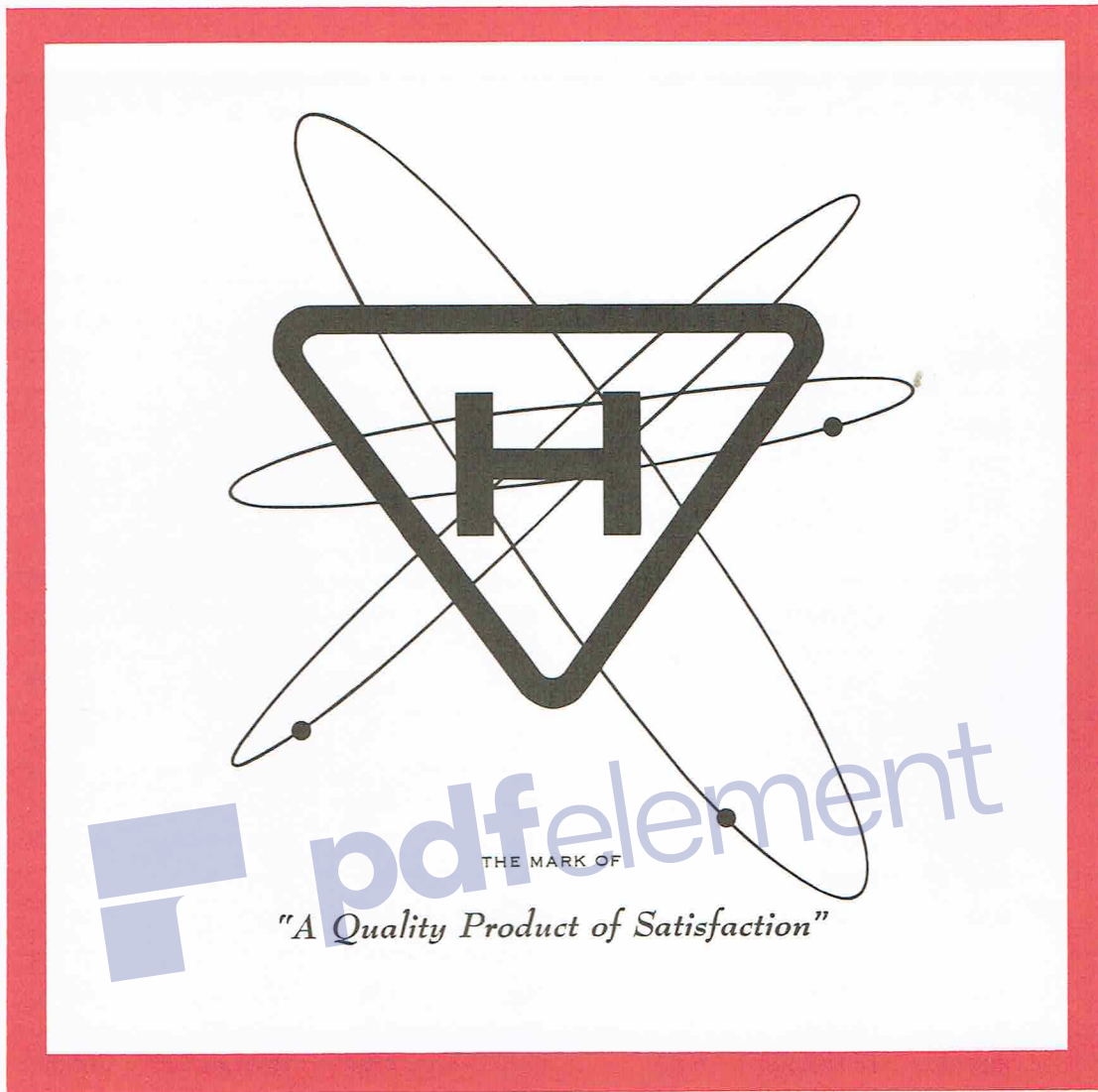
Hermetically sealed units are for a tolerance of ± 20%, if ± 10% tolerance is desired add "K" to part number, if ± 5% is desired add "C" to part number.



# FILM CAPACITORS

CAP.	VOLTS	PART NO.	WRAPPED UNITS			HERMETICALLY SEALED		
			T ± 1/32	W ± 1/32	L ± 1/32	PART NO.	DIA.	LGTH.
.50	200	P52M	7/32	13/32	1 1/8	1Q2504	.400	1.125
	300	P53M	11/32	1/2	1 1/8	1Q3504	.500	1.125
	400	P54M	11/32	1/2	1 7/8	1Q4504	.562	1.875
	600	P56M	9/16	23/32	1 7/8	1Q6504	.670	1.875
.75	200	P752M	1/4	7/16	1 5/16	1Q2754	.400	1.312
	300	P753M	3/8	9/16	1 5/16	1Q3754	.562	1.312
	400	P754M	7/16	5/8	1 7/8	1Q4754	.670	1.875
	600	P756M	11/16	7/8	1 7/8	1Q6105	1.000	1.875
1.00	200	1P2M	5/16	15/32	1 5/16	1Q2105	.500	1.312
	300	1P3M	7/16	5/8	1 5/16	1Q3105	.562	1.312
	400	1P4M	17/32	11/16	1 7/8	1Q4105	.670	1.875
	600	1P6M	13/16	31/32	1 7/8	1Q6105	1.000	1.875
1.50	200	1P52M	5/16	15/32	1 7/8	1Q2155	.562	1.875
	300	1P53M	7/16	19/32	1 7/8	1Q3155	.562	1.875
	400	1P54M	21/32	13/16	1 7/8	1Q4155	1.000	1.875
2.00	200	2P2M	11/32	17/32	1 7/8	1Q2205	.562	1.875
	300	2P3M	17/32	11/16	1 7/8	1Q3205	.670	1.875
3.00	200	3P2M	7/16	5/8	1 7/8	1Q2305	.670	1.875
	300	3P3M	21/32	13/16	1 7/8	1Q3305	1.000	1.875
4.00	200	4P2M	17/32	11/16	1 7/8	1Q2405	.670	1.875
	300	4P3M	3/4	15/16	1 7/8	1Q3405	1.000	1.875
5.00	200	5P2M	19/32	25/32	1 7/8	1Q2505	.750	1.875
	300	5P3M	27/32	11/32	1 7/8	1Q3505	1.000	1.875
8.00	200	8P2M	25/32	15/16	1 7/8	1Q2805	1.000	1.875

Hermetically sealed units are for a tolerance of ± 20%, if ± 10% tolerance is desired add "K" to part number, if ± 5% is desired add "C" to part number.



pdfelement  
THE MARK OF  
*"A Quality Product of Satisfaction"*



**HOPKINS** *Engineering* **COMPANY**

12900 FOOTHILL BOULEVARD  
SAN FERNANDO, CALIFORNIA  
EMPIRE 1-8691