

Aluminum Capacitors + 105 °C, Miniature, Radial Lead

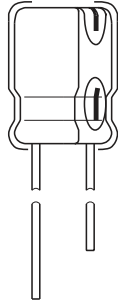


Fig.1 Component outline

FEATURES

- Low impedance
- Low ESR
- High ripple current capability
- High capacitance
- Long life and stability

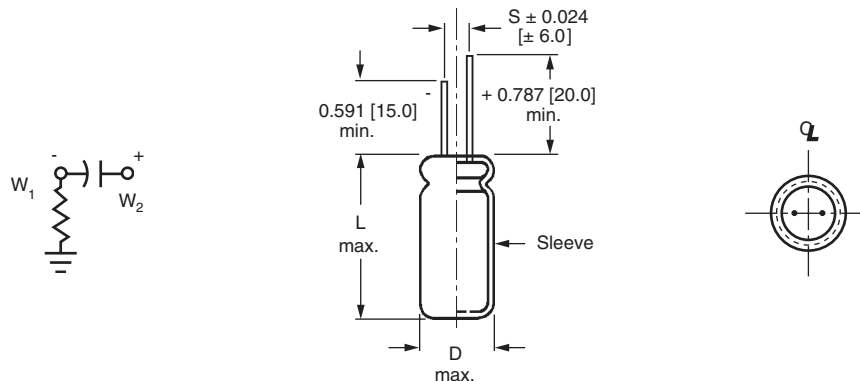
QUICK REFERENCE DATA	
DESCRIPTION	VALUE
Nominal case size Ø D x L in mm	0.315" x 0.472" [8.0 x 12.0] to 0.709" x 1.575" [18.0 x 40.0]
Operating temperature	- 55 °C to + 105 °C
Rated capacitance range, C _R	120 µF to 15 000 µF
Tolerance on C _R	± 20 %
Rated voltage range, U _R	6.3 WVDC to 35 WVDC
Termination	2 and 3 radial leads and axial mount
Life validation test at 105 °C	5000 hours: Δ CAP ≤ 20 % from initial measurement. Δ ESR ≤ 1.25 x initial specified limit. Δ DCL ≤ initial specified limit. Δ Z ≤ 1.75 x initial measurement.
Shelf life at 105 °C	1000 hours: Δ CAP ≤ 15 % from initial measurement. Δ ESR ≤ 1.10 x initial specified limit. Δ DCL ≤ initial specified limit.
DC leakage current at 25 °C	I = 0.01 CV, 2 minutes charge time I in µA, C in µF, V in Volts

RIPPLE CURRENT MULTIPLIERS			
TEMPERATURE			
Ambient temperature	Multipliers		
+ 105 °C	1.0		
+ 85 °C	1.73		
+ 65 °C	2.23		
+ 45 °C	2.64		
+ 25 °C	3.0		
FREQUENCY (Hz)			
WVDC	400	1K - 19K	20K - 200K
6.3 - 35	0.75	0.82	1.0

LOW TEMPERATURE PERFORMANCE		
CAPACITANCE RATIO C - 55 °C / C + 25 °C MINIMUM AT 120 Hz		
MAXIMUM CAPACITANCE CHANGE		
Voltage	Multiplier	
6.3 V - 35 V	0.75	
MAXIMUM IMPEDANCE CHANGE		
Voltage	120 kHz	20 kHz - 100 kHz
6.3 V - 35 V	4	40

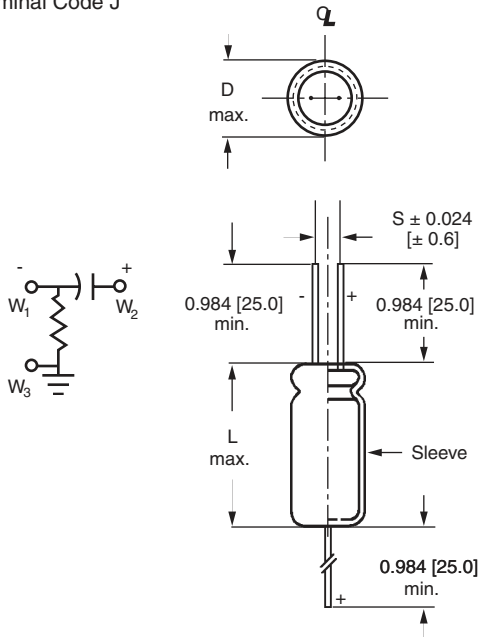
DIMENSIONAL CONFIGURATIONS in inches [millimeters]

Terminal Code D

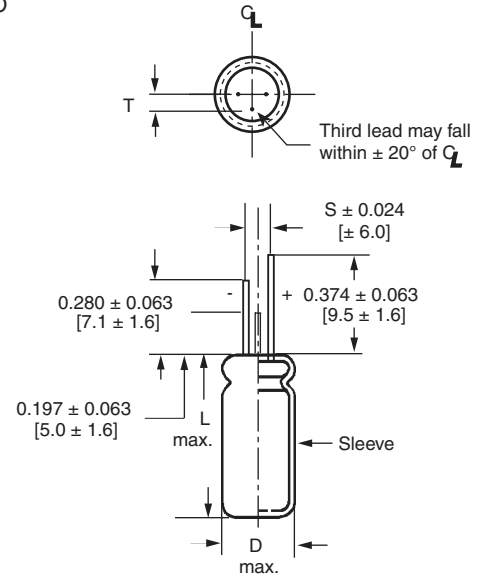


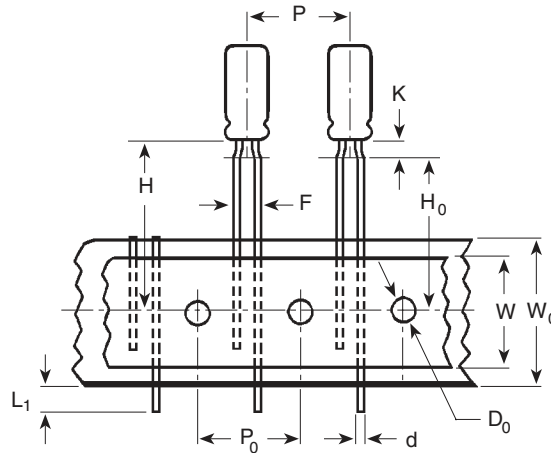
DIMENSIONS in inches [millimeters]											
CASE CODE	NOMINAL		STYLE 4		STYLE 3		LEAD SPACING		LEAD DIAMETER		TYPICAL WEIGHT (g)
	D	L	D (max.)	L (max.)	D (max.)	L (max.)	S ± 0.024 [0.60]	T ± 0.020 [0.50]	Nominal	AWG No.	
BB	0.315 [8.0]	0.472 [12.0]	0.335 [8.5]	0.512 [13.0]	0.335 [8.5]	0.551 [14.0]	0.138 [3.5]	N/A	0.025 [0.63]	22	1.0
CC	0.394 [10.0]	0.512 [13.0]	0.413 [10.5]	0.563 [14.3]	0.413 [10.5]	0.630 [16.0]	0.197 [5.0]	N/A	0.025 [0.63]	22	1.7
CD	0.394 [10.0]	0.630 [16.0]	0.413 [10.5]	0.670 [17.0]	0.413 [10.5]	0.740 [18.8]	0.197 [5.0]	N/A	0.025 [0.63]	22	2.0
CG	0.394 [10.0]	0.787 [20.0]	0.413 [10.5]	0.846 [21.5]	0.413 [10.5]	0.906 [23.0]	0.197 [5.0]	N/A	0.025 [0.63]	22	2.5
DG	0.492 [12.5]	0.787 [20.0]	0.512 [13.0]	0.846 [21.5]	0.512 [13.0]	0.906 [23.0]	0.197 [5.0]	0.098 [2.5]	0.032 [0.81]	20	3.8
DK	0.492 [12.5]	0.984 [25.0]	0.512 [13.0]	1.043 [26.5]	0.512 [13.0]	1.142 [29.0]	0.197 [5.0]	0.098 [2.5]	0.032 [0.81]	20	4.5
DT	0.492 [12.5]	1.319 [33.5]	0.512 [13.0]	1.346 [34.2]	0.512 [13.0]	1.417 [36.0]	0.197 [5.0]	0.098 [2.5]	0.032 [0.81]	20	5.8
DS	0.492 [12.5]	1.673 [42.5]	0.512 [13.0]	1.720 [43.7]	0.512 [13.0]	1.791 [45.5]	0.197 [5.0]	0.098 [2.5]	0.032 [0.81]	20	7.3
EK	0.630 [16.0]	0.984 [25.0]	0.650 [16.5]	1.031 [26.2]	0.650 [16.5]	1.098 [27.9]	0.295 [7.5]	0.150 [3.8]	0.032 [0.81]	20	7.2
EN	0.630 [16.0]	1.260 [32.0]	0.650 [16.5]	1.319 [33.5]	0.650 [16.5]	1.417 [36.0]	0.295 [7.5]	0.150 [3.8]	0.032 [0.81]	20	9.4
ER	0.630 [16.0]	1.417 [36.0]	0.650 [16.5]	1.476 [37.5]	0.650 [16.5]	1.575 [40.0]	0.295 [7.5]	0.150 [3.8]	0.032 [0.81]	20	10.6
EU	0.630 [16.0]	1.575 [40.0]	0.650 [16.5]	1.642 [41.7]	0.650 [16.5]	1.669 [42.4]	0.295 [7.5]	0.150 [3.8]	0.032 [0.81]	20	11.8
FR	0.709 [18.0]	1.417 [36.0]	0.728 [18.5]	1.476 [37.5]	0.728 [18.5]	1.575 [40.0]	0.295 [7.5]	0.150 [3.8]	0.032 [0.81]	20	13.4
FV	0.709 [18.0]	1.575 [40.0]	0.728 [18.5]	1.654 [42.0]	0.728 [18.5]	1.693 [43.0]	0.295 [7.5]	0.150 [3.8]	0.032 [0.81]	20	14.9

Terminal Code J

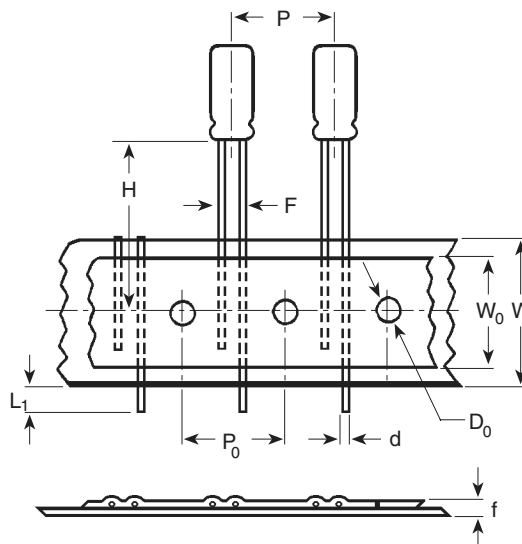


Terminal Code O



TAPE AND REEL, SPECIFICATIONS TO EIA-468D in inches [millimeters]**Formed Leads**

DIMENSIONS in inches [millimeters]		
CASE SIZE	F LEAD SPACING	STD. QTY/REEL
0.236 x 0.453 [6.0 x 11.0]	0.197 [5.0]	800
0.315 x 0.472 [8.0 x 12.0]	0.197 [5.0]	700

Unformed (Straight) Leads

DIMENSIONS in inches [millimeters]		
CASE SIZE	F LEAD SPACING	STD. QTY/REEL
0.236 x 0.453 [6.0 x 11.0]	0.098 ⁽¹⁾ [2.5]	800
0.315 x 0.472 [8.0 x 12.0]	0.138 ⁽¹⁾ [3.5]	700
0.394 x 0.512 [10.0 x 13.0]	0.197 [5.0]	500
0.394 x 0.630 [10.0 x 16.0]	0.197 [5.0]	500
0.394 x 0.787 [10.0 x 20.0]	0.197 [5.0]	500

Note⁽¹⁾ Available as special order.



Aluminum Capacitors
+ 105 °C, Miniature, Radial Lead

Vishay Sprague

DIMENSIONS in inches [millimeters]					
ITEM	CASE SIZE (Diameter x Length)				
	0.236 x 0.433 [6.0 x 11.0]	0.315 x 0.472 [8.0 x 12.0]	0.394 x 0.512 [10.0 x 13.0]	0.394 x 0.630 [10.0 x 16.0]	0.394 x 0.787 [10.0 x 20.0]
d - Lead-wire diameter	0.025 [0.63]	0.025 [0.63]	0.025 [0.63]	0.025 [0.63]	0.025 [0.63]
P - Pitch of component	0.500 [12.7]	0.500 [12.7]	0.500 [12.7]	0.500 [12.7]	0.500 [12.7]
P ₀ - Feed hole pitch	0.500 [12.7]	0.500 [12.7]	0.500 [12.7]	0.500 [12.7]	0.500 [12.7]
F - Lead-to-lead distance	0.197 [5.0]	0.197 [5.0]	0.197 [5.0]	0.197 [5.0]	0.197 [5.0]
K - Clinch height	0.098 [2.5]	0.157 [4.0]	N/A	N/A	N/A
H - Height of component from tape center	0.728 [18.5]	0.787 [20.0]	0.906 [23.0]	0.906 [23.0]	0.906 [23.0]
H ₀ - Lead-wire clinch height	0.630 [16.0]	0.630 [16.0]	N/A	N/A	N/A
W - Tape width	0.709 [18.0]	0.709 [18.0]	0.709 [18.0]	0.709 [18.0]	0.709 [18.0]
W ₀ - Hold down tape width	0.591 [15.0]	0.591 [15.0]	0.591 [15.0]	0.591 [15.0]	0.591 [15.0]
D ₀ - Feed hole diameter	0.157 [4.0]	0.157 [4.0]	0.157 [4.0]	0.157 [4.0]	0.157 [4.0]
t - Total tape thickness	0.028 [0.7]	0.028 [0.7]	0.028 [0.7]	0.028 [0.7]	0.028 [0.7]
L ₁ -Maximumlead protrusion	0.118 [3.0]	0.118 [3.0]	0.118 [3.0]	0.118 [3.0]	0.118 [3.0]

Note

Positive leader is standard. Negative leader is available by special order

ORDERING EXAMPLE

Electrolytic capacitor 757D series: 757D 108 M 010 CG 3 D

DESCRIPTION	
CODE	EXPLANATION
757D	product type
108	capacitance value (1000 μF)
M	tolerance (M = ± 20 %)
010	voltage rating at 105 °C (6r3 = 6.3 V)
CG	can size (see dimensions table)
3	sleeve and sealing (3 = p.v.c. sleeve w/epoxy end seal)
D	packaging (D = bulk; straight leads)

STANDARD RATINGS in inches [millimeters]							
CAPACITANCE (μF)	PART NUMBER	NOMINAL CASE SIZE D x L	Max. ESR At + 25 °C (mΩ)		Max. RIPPLE At + 105 °C(A)		Max. Z At + 25 C(mΩ) 100 Hz
			120 Hz	20 kHz - 40 kHz	120 Hz	20 kHz - 40 kHz	
6.3 WVDC At 105 °C, SURGE = 8 V							
470.0	757D477M6R3BB4D	0.315 x 0.472 [8.0 x 12.0]	523.0	163.0	0.47	0.658	198.0
680.0	757D687M6R3CC4D	0.394 x 0.512 [10.0 x 13.0]	310.0	98.0	0.65	0.907	120.0
820.0	757D827M6R3CD4D	0.394 x 0.630 [10.0 x 16.0]	194.0	77.0	0.88	1.09	96.0
1200.0	757D128M6R3CG4D	0.394 x 0.787 [10.0 x 20.0]	130.0	53.0	1.20	1.47	65.0
2200.0	757D228M6R3DG4D	0.492 x 0.787 [12.5 x 20.0]	113.0	38.0	1.33	1.81	49.0
2700.0	757D278M6R3DK4D	0.492 x 0.984 [12.5 x 25.0]	76.0	31.0	1.78	2.18	40.0
3900.0	757D398M6R3DT4D	0.492 x 1.319 [12.5 x 33.5]	49.0	20.0	2.45	2.98	26.0
5600.0	757D568M6R3DS4D	0.492 x 1.673 [12.5 x 42.5]	34.0	17.0	3.26	3.61	21.0
5600.0	757D568M6R3EK4D	0.630 x 0.984 [16.0 x 25.0]	62.0	22.0	2.15	2.82	28.0
6800.0	757D688M6R3EN4D	0.630 x 1.260 [16.0 x 32.0]	43.0	19.0	2.84	3.35	24.0
8200.0	757D828M6R3ER4D	0.630 x 1.417 [16.0 x 36.0]	35.0	16.0	3.30	3.82	20.0
12 000.0	757D129M6R3EU4D	0.630 x 1.575 [16.0 x 40.0]	31.0	14.0	3.63	4.24	18.0
12 000.0	757D129M6R3FR4D	0.709 x 1.417 [18.0 x 36.0]	38.0	16.5	3.20	3.83	21.0
15 000.0	757D159M6R3FV4D	0.709 x 1.575 [18.0 x 40.0]	32.0	15.0	3.68	4.28	19.0

Note

Case Style 3 = PVC sleeve with resin seal standard. Required for exposure to halogenated cleaning solvents. Case style 4 = PVC sleeve.

STANDARD RATINGS in inches [millimeters]							
CAPACITANCE (μ F)	PART NUMBER	NOMINAL CASE SIZE D x L	Max. ESR At + 25 °C (m Ω)		Max. RIPPLE At + 105 °C(A)		Max. Z At + 25 C(m Ω) 100 Hz
			120 Hz	20 kHz - 40 kHz	120 Hz	20 kHz - 40 kHz	
10 WVDC At 105 °C, SURGE = 13 V							
330.0	757D337M010BB4D	0.315 x 0.472 [8.0 x 12.0]	576.0	163.0	0.45	0.658	198.0
470.0	757D477M010CC4D	0.394 x 0.512 [10.0 x 13.0]	340.0	98.0	0.62	0.907	120.0
560.0	757D567M010CD4D	0.394 x 0.630 [10.0 x 16.0]	212.0	77.0	0.84	1.09	96.0
1000.0	757D108M010CG4D	0.394 x 0.787 [10.0 x 20.0]	142.0	53.0	1.14	1.47	65.0
1800.0	757D188M010DG4D	0.492 x 0.787 [12.5 x 20.0]	123.0	38.0	1.28	1.81	49.0
2200.0	757D228M010DK4D	0.492 x 0.984 [12.5 x 25.0]	82.0	31.0	1.71	2.18	40.0
10 WVDC At 105 °C, SURGE = 13 V							
2700.0	757D278M010DT4D	0.492 x 1.319 [12.5 x 33.5]	53.0	20.0	2.35	2.98	26.0
3900.0	757D398M010DS4D	0.492 x 1.673 [12.5 x 42.5]	37.0	17.0	3.13	3.61	21.0
3900.0	757D398M010EK4D	0.630 x 0.984 [16.0 x 25.0]	66.0	22.0	2.15	2.82	28.0
5600.0	757D568M010EN4D	0.630 x 1.260 [16.0 x 32.0]	45.0	19.0	2.77	3.35	24.0
6800.0	757D688M010ER4D	0.630 x 1.417 [16.0 x 36.0]	37.0	16.0	3.22	3.82	20.0
8200.0	757D828M010EU4D	0.630 x 1.575 [16.0 x 40.0]	33.0	14.0	3.54	4.24	18.0
8200.0	757D828M010FR4D	0.709 x 1.417 [18.0 x 36.0]	40.0	16.5	3.14	3.83	21.0
10 000.0	757D109M010FV4D	0.709 x 1.575 [18.0 x 40.0]	33.0	15.0	3.61	4.28	19.0
16 WVDC At 105 °C, SURGE = 20 V							
270.0	757D277M016BB4D	0.315 x 0.472 [8.0 x 12.0]	703.0	163.0	0.40	0.658	198.0
330.0	757D337M016CC4D	0.394 x 0.512 [10.0 x 13.0]	410.0	98.0	0.56	0.907	120.0
390.0	757D397M016CD4D	0.394 x 0.630 [10.0 x 16.0]	257.0	77.0	0.77	1.09	96.0
680.0	757D687M016CG4D	0.394 x 0.787 [10.0 x 20.0]	171.0	53.0	1.04	1.47	65.0
1200.0	757D128M016DG4D	0.492 x 0.787 [12.5 x 20.0]	145.0	38.0	1.26	1.81	49.0
1500.0	757D158M016DK4D	0.492 x 0.984 [12.5 x 25.0]	97.0	31.0	1.57	2.18	45.0
2200.0	757D228M016DT4D	0.492 x 1.319 [12.5 x 33.5]	62.0	20.0	2.17	2.98	26.0
3300.0	757D338M016DS4D	0.492 x 1.673 [12.5 x 42.5]	43.0	17.0	2.88	3.61	21.0
2700.0	757D278M016EK4D	0.630 x 0.984 [16.0 x 25.0]	74.0	22.0	2.15	2.82	28.0
3900.0	757D398M016EN4D	0.630 x 1.260 [16.0 x 32.0]	51.0	19.0	2.61	3.35	24.0
4700.0	757D478M016ER4D	0.630 x 1.417 [16.0 x 36.0]	41.0	16.0	3.04	3.82	20.0
5600.0	757D568M016EU4D	0.630 x 1.575 [16.0 x 40.0]	37.0	14.0	3.34	4.24	18.0
6800.0	757D688M016FR4D	0.709 x 1.417 [18.0 x 36.0]	44.0	16.5	3.01	3.83	21.0
8200.0	757D828M016FV4D	0.709 x 1.575 [18.0 x 40.0]	36.0	15.0	3.45	4.28	19.0
25 WVDC At 105 °C, SURGE = 32 V							
180.0	757D187M025BB4D	0.315 x 0.472 [8.0 x 12.0]	851.0	163.0	0.37	0.658	198.0
220.0	757D227M025CC4D	0.394 x 0.512 [10.0 x 13.0]	493.0	98.0	0.51	0.907	120.0
270.0	757D277M025CD4D	0.394 x 0.630 [10.0 x 16.0]	308.0	77.0	0.70	1.09	96.0
470.0	757D477M025CG4D	0.394 x 0.787 [10.0 x 20.0]	206.0	53.0	0.95	1.47	65.0
820.0	757D827M025DG4D	0.492 x 0.787 [12.5 x 20.0]	171.0	38.0	1.12	1.81	49.0
1000.0	757D108M025DK4D	0.492 x 0.984 [12.5 x 25.0]	114.0	31.0	1.45	2.18	40.0
1500.0	757D158M025DT4D	0.492 x 1.319 [12.5 x 33.5]	73.0	20.0	1.99	2.98	26.0
2200.0	757D228M025DS4D	0.492 x 1.673 [12.5 x 42.5]	51.0	17.0	2.66	3.61	21.0
1800.0	757D188M025EK4D	0.630 x 0.984 [16.0 x 25.0]	83.0	22.0	2.15	2.82	28.0
2700.0	757D278M025EN4D	0.630 x 1.260 [16.0 x 32.0]	57.0	19.0	2.46	3.35	24.0
3300.0	757D338M025ER4D	0.630 x 1.417 [16.0 x 36.0]	47.0	16.0	2.87	3.82	20.0
3900.0	757D398M025EU4D	0.630 x 1.575 [16.0 x 40.0]	41.0	14.0	3.15	4.24	18.0
3900.0	757D398M025FR4D	0.709 x 1.417 [18.0 x 36.0]	48.0	16.5	2.87	3.83	21.0
4700.0	757D478M025FV4D	0.709 x 1.575 [18.0 x 40.0]	40.0	15.0	3.30	4.28	19.0

Note

Case Style 3 = PVC sleeve with resin seal standard. Required for exposure to halogenated cleaning solvents. Case style 4 = PVC sleeve.

Aluminum Capacitors
+ 105 °C, Miniature, Radial Lead

Vishay Sprague

STANDARD RATINGS in inches [millimeters]							
CAPACITANCE (μ F)	PART NUMBER	NOMINAL CASE SIZE D x L	Max. ESR At + 25 °C (m Ω)		Max. RIPPLE At + 105 °C(A)		Max. Z
			120 Hz	20 kHz - 40 kHz	120 Hz	20 kHz - 40 kHz	At + 25 C(m Ω) 100 Hz
35 WVDC At 105 °C, SURGE = 44 V							
120.0	757D127M035BB4D	0.315 x 0.472 [8.0 x 12.0]	1073.0	163.0	0.33	0.658	198.0
150.0	757D157M035CC4D	0.394 x 0.512 [10.0 x 13.0]	617.0	98.0	0.46	0.907	120.0
180.0	757D187M035CD4D	0.394 x 0.630 [10.0 x 16.0]	386.0	77.0	0.62	1.09	96.0
330.0	757D337M035CG4D	0.394 x 0.787 [10.0 x 20.0]	257.0	53.0	0.85	1.47	65.0
560.0	757D567M035DG4D	0.492 x 0.787 [12.5 x 20.0]	210.0	38.0	1.12	1.81	49.0
680.0	757D687M035DK4D	0.492 x 0.984 [12.5 x 25.0]	140.0	31.0	1.35	2.18	40.0
1000.0	757D108M035DT4D	0.492 x 1.319 [12.5 x 33.5]	90.0	20.0	1.80	2.98	26.0
1500.0	757D158M035DS4D	0.492 x 1.673 [12.5 x 42.5]	63.0	17.0	2.40	3.61	21.0
1200.0	757D128M035EK4D	0.630 x 0.984 [16.0 x 25.0]	97.0	22.0	2.15	2.82	28.0
1800.0	757D188M035EN4D	0.630 x 1.260 [16.0 x 32.0]	67.0	19.0	2.28	3.35	24.0
2200.0	757D228M035ER4D	0.630 x 1.417 [16.0 x 36.0]	54.0	16.0	2.65	3.82	20.0
2700.0	757D278M035EU4D	0.630 x 1.575 [16.0 x 40.0]	48.0	14.0	2.92	4.24	18.0
2700.0	757D278M035FR4D	0.709 x 1.417 [18.0 x 36.0]	54.0	16.5	2.69	3.83	21.0
3300.0	757D338M035FV4D	0.709 x 1.575 [18.0 x 40.0]	45.0	15.0	3.09	4.28	19.0

Note

Case Style 3 = PVC sleeve with resin seal standard. Required for exposure to halogenated cleaning solvents. Case style 4 = PVC sleeve.



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.