

# Aluminum Capacitors +85 °C, Tubular, Axial Lead, General Purpose



QUICK REFERENCE DATA				
DESCRIPTION	VALUE			
Nominal case size Ø D x L in mm	0.75" x 1.125" [19.05 x 28.575] to 1.375" x 4.125" [34.925 x 104.775]			
Operating temperature	-40 °C to +85 °C			
Rated capacitance range, C <sub>R</sub>	15 μF to 220 000 μF			
Tolerance on C <sub>R</sub>	-10 %, +50 %; -10 %, +75 %			
Rated voltage range, U <sub>R</sub>	6.3 WV <sub>DC</sub> to 450 WV <sub>DC</sub>			
Termination	Axial leads			
Life validation test at 85 °C	1000 h: $\Delta$ CAP $\leq$ 15 % from initial measurement. $\Delta$ ESR $\leq$ 1.5 x initial specified limit. $\Delta$ DCL $\leq$ initial specified limit.			
Shelf life at 85 °C	500 h: $\Delta CAP \le 10$ % from initial measurement. $\Delta ESR \le 1.3$ x initial specified limit. $\Delta DCL \le 2.0$ x initial specified limit.			
DC leakage current (after 5 min charge)	I = $k√CV$ k = 6.0  at  +25 °C; k = 36.0  at  +85 °C I in μA, C in μF, V in Volts			

## **FEATURES**

- General purpose capacitor
- Rugged construction
- Largest CV ratings in axial leaded capacitor
- Material categorization: for definitions of compliance please see <a href="https://www.vishay.com/doc?99912">www.vishay.com/doc?99912</a>



RIPPLE CURRENT MULTIPLIERS						
	TEMPERATURE					
AMBIENT TE	AMBIENT TEMPERATURE MULTIPLIERS					
+75	5 °C	1	1.4			
+65	5 °C	1	1.7			
+45 °C a	+45 °C and below		2.0			
	FREQUEN	ICY (Hz)				
WV <sub>DC</sub>	50 TO 60	300 TO 400	1000 AND UP			
0 to 50	0.85	1.10	1.15			
51 to 299	0.85	1.15	1.20			
300 to up	0.80	1.30	1.40			

LOW TEMPERATURE PERFORMANCE				
CAPACITANCE RATIO C <sup>-40 °C</sup> / C <sup>+25 °C</sup> MINIMUM AT 120 Hz				
Rated Voltage (WV <sub>DC</sub> )	Capacitance Remaining			
0 to 40	35			
41 to 63	45			
64 to 100	60			
101 to 350	20			
351 to 450	15			
ESR RATIO ESR-40 °C / ESF	R+ <sup>25°C</sup> MAXIMUM AT 120 Hz			
Rated Voltage (WV <sub>DC</sub> )	Multiplier			
0 to 40	60			
41 to 63	55			
64 to 100	65			
101 to 350	180			
351 to 450	190			

<b>DIMENSIONS</b> in inches [millimeters]							
CASE CODE	STYLE 6 AND 7		TYPICAL	CASE	STYLE 6 AND 7		TYPICAL
	D	L	WEIGHT	CODE	D	L	WEIGTH
GE	0.760 ± 0.020 [19.3 ± 0.51]	1.141 ± 0.062 [29.0 ± 1.58]	0.46 oz. (13 g)	GL	0.760 ± 0.020 [19.3 ± 0.51]	2.141 ± 0.062 [54.4 ± 1.58]	0.74 oz. (21 g)
GJ	0.760 ± 0.020 [19.3 ± 0.51]	1.641 ± 0.062 [41.7 ± 1.58]	0.67 oz. (19 g)	GP	0.760 ± 0.020 [19.3 ± 0.51]	2.641 ± 0.062 [67.1 ± 1.58]	0.88 oz. (25 g)
GS	0.760 ± 0.020 [19.3 ± 0.51]	3.141 ± 0.062 [79.8 ± 1.58]	1.16 oz. (33 g)	KS	1.135 ± 0.020 [28.8 ± 0.51]	3.141 ± 0.062 [79.8 ± 1.58]	2.54 oz. (72 g)
GT	0.760 ± 0.020 [19.3 ± 0.51]	3.641 ± 0.062 [92.5 ± 1.58]	1.34 oz. (38 g)	KT	1.135 ± 0.020 [28.8 ± 0.51]	3.641 ± 0.062 [92.5 ± 1.58]	2.96 oz. (84 g)
HE	0.885 ± 0.020 [22.5 ± 0.51]	1.141 ± 0.062 [29.0 ± 1.58]	0.63 oz. (18 g)	KD	1.135 ± 0.020 [28.8 ± 0.51]	4.141 ± 0.062 [105.2 ± 1.58]	3.35 oz. (95 g)

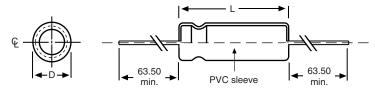
Revision: 20-Jul-16 1 Document Number: 42037

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# Vishay Sprague

DIMENSIONS in inches [millimeters]							
CASE	STYLE 6 AND 7		TYPICAL	CASE	STYLE 6 AND 7		TYPICAL
CODE	D	L	WEIGHT	CODE	D	L	WEIGTH
HJ	0.885 ± 0.020 [22.5 ± 0.51]	1.641 ± 0.062 [41.7 ± 1.58]	0.95 oz. (27 g)	LE	1.260 ± 0.020 [32.0 ± 0.51]	1.141 ± 0.062 [29.0 ± 1.58]	1.13 oz. (32 g)
HL	0.885 ± 0.020 [22.5 ± 0.51]	2.141 ± 0.062 [54.4 ± 1.58]	1.02 oz. (29 g)	LJ	1.260 ± 0.020 [32.0 ± 0.51]	1.641 ± 0.062 [41.7 ± 1.58]	1.62 oz. (46 g)
HP	0.885 ± 0.020 [22.5 ± 0.51]	2.641 ± 0.062 [67.1 ± 1.58]	1.38 oz. (39 g)	LL	1.260 ± 0.020 [32.0 ± 0.51]	2.141 ± 0.062 [54.4 ± 1.58]	2.11 oz. (60 g)
HS	0.885 ± 0.020 [22.5 ± 0.51]	3.141 ± 0.062 [79.8 ± 1.58]	1.73 oz. (49 g)	LP	1.260 ± 0.020 [32.0 ± 0.51]	2.641 ± 0.062 [67.1 ± 1.58]	2.65 oz. (75 g)
HT	0.885 ± 0.020 [22.5 ± 0.51]	3.641 ± 0.062 [92.5 ± 1.58]	2.08 oz. (59 g)	LS	1.260 ± 0.020 [32.0 ± 0.51]	3.141 ± 0.062 [79.8 ± 1.58]	3.14 oz. (89 g)
JE	1.010 ± 0.020 [25.7 ± 0.51]	1.141 ± 0.062 [29.0 ± 1.58]	0.81 oz. (23 g)	LT	1.260 ± 0.020 [32.0 ± 0.51]	3.641 ± 0.062 [92.5 ± 1.58]	3.63 oz. (103 g)
JJ	1.010 ± 0.020 [25.7 ± 0.51]	1.641 ± 0.062 [41.7 ± 1.58]	1.02 oz. (29 g)	LD	1.260 ± 0.020 [32.0 ± 0.51	4.141 ± 0.062 [105.2 ± 1.58]	4.16 oz. (118 g)
JL	1.010 ± 0.020 [25.7 ± 0.51]	2.141 ± 0.062 [54.4 ± 1.58]	1.55 oz. (44 g)	ME	1.375 ± 0.020 [34.9 ± 0.51]	1.141 ± 0.062 [29.0 ± 1.58]	1.38 oz. (39 g)
JP	1.010 ± 0.020 [25.7 ± 0.51]	2.641 ± 0.062 [67.1 ± 1.58]	1.87 oz. (53 g)	MJ	1.375 ± 0.020 [34.9 ± 0.51]	1.641 ± 0.062 [41.7 ± 1.58]	1.98 oz. (56 g)
JS	1.010 ± 0.020 [25.7 ± 0.51]	3.141 ± 0.062 [79.8 ± 1.58]	2.22 oz. (63 g)	ML	1.375 ± 0.020 [34.9 ± 0.51]	2.141 ± 0.062 [54.4 ± 1.58]	2.57 oz. (73 g)
JT	1.010 ± 0.020 [25.7 ± 0.51]	3.641 ± 0.062 [92.5 ± 1.58]	2.54 oz. (72 g)	MP	1.375 ± 0.020 [34.9 ± 0.51]	2.641 ± 0.062 [67.1 ± 1.58]	3.21 oz. (91 g)
KE	1.135 ± 0.020 [28.8 ± 0.51]	1.141 ± 0.062 [29.0 ± 1.58]	0.92 oz. (26 g)	MS	1.375 ± 0.020 [34.9 ± 0.51]	3.141 ± 0.062 [79.8 ± 1.58]	3.81 oz. (108 g)
KJ	1.135 ± 0.020 [28.8 ± 0.51]	1.641 ± 0.062 [41.7 ± 1.58]	1.31 oz. (37 g)	MT	1.375 ± 0.020 [34.9 ± 0.51]	3.641 ± 0.062 [92.5 ± 1.58]	4.44 oz. (126 g)
KL	1.135 ± 0.020 [28.8 ± 0.51]	2.141 ± 0.062 [54.4 ± 1.58]	1.73 oz. (49 g)	MD	1.375 ± 0.020 [34.9 ± 0.51]	4.141 ± 0.062 [105.2 ± 1.58]	5.04 oz. (143 g)
KP	1.135 ± 0.020 [28.8 ± 0.51]	2.641 ± 0.062 [67.1 ± 1.58]	2.15 oz. (61 g)	-	-	-	-

## **DIMENSIONS AND AVAILABLE FORMS**



Lead diameter No. 18 AWG (0.040" [1.016 mm] Dia.)

### **ORDERING EXAMPLE**

Electrolytic capacitor 53D series: 53D 282 G 025 GJ 6

DESCRIPTION				
CODE	EXPLANATION			
53D	Product type			
282	Capacitance value (2800 μF)			
G	Tolerance (G = -10 % / +75 %; F = -10 % / +50 %)			
025	Voltage rating at 85 °C (025 = 25 V)			
GJ	Can size (see Dimensions table)			
6	Sleeve and sealing (6 = P.V.C. sleeve)			

#### Note

 For lead (Pb)-free / RoHS compliant products add suffix "E3" to part number. Example: 53D282G025GJ6E3



# Vishay Sprague

CAPACITANCE (µF)         CASE CODE         PART NUMBER         MAX. ESR AT +25 °C (µC)         MAX. RMS RIPPLE AT +85 120 Hz (mA)           6900.0         HJ         \$5105826016HJ6         73         2150           10 000.0         HL         \$5305826016HJ6         52         2840           28 WO <sub>CC</sub> AT +85 °C, SURGE = 35 V           2800.0         GJ         \$530282G025HJ6         103         1650           4300.0         HL         \$530522G025HJ6         72         2170           6200.0         HL         \$530522G025HJ6         51         2870           11 000.0         JP         \$30113G025JP6         33         4230           35 WV <sub>DC</sub> AT +85 °C, SURGE = 45 V           1100.0         GE         \$30112G035GE6         219         980           2100.0         GJ         \$530212G035GH6         77         2090           4700.0         HL         \$53022G035HJ6         77         2090           4700.0         HL         \$530247G035HL6         \$4         2780           8300.0         JP         \$30832G035JH6         \$7         2090           1000.0         GE         \$30102G050G6         231         95           1900.0	ELECTRICAL DATA AND ORDERING INFORMATION						
6900.0	CAPACITANCE (μF)		PART NUMBER	120 Hz			
10 000.0 HL S3D103G016HL6 52 2840  25 WV <sub>DC</sub> AT +85 °C, SURGE = 35 V  2800.0 GJ S3D282G025GJ6 103 1650  4300.0 HJ S3D432G025HJ6 72 2170  6200.0 HL S3D622G025HL6 51 2870  11 000.0 JP S3D113G025JP6 33 4230  35 WV <sub>DC</sub> AT +85 °C, SURGE = 45 V  1100.0 GE S3D112G035GJ6 111 1590  2100.0 GJ S3D212G035GJ6 111 1590  4700.0 HL S3D472G035HL6 54 2780  4700.0 HL S3D472G035HL6 54 2780  8300.0 JP S3D832G035JP6 34 4110  50 WV <sub>DC</sub> AT +85 °C, SURGE = 70 V  1000.0 GE S3D102G05GJ66 231 950  1300.0 GJ S3D102G05GJ66 131 1470  1000.0 GE S3D102G05GJ66 231 950  1300.0 GJ S3D102G05GJ66 231 950  1300.0 GJ S3D102G05GJ66 51 11 1470  1900.0 HJ S3D132G050HJ6 94 1900  2800.0 HL S3D282G05HL6 65 2540  3800.0 JL S3D832G05HL6 65 2540  3800.0 JL S3D832G05HL6 65 2540  3800.0 JL S3D82G05GJL6 51 3090  2800.0 HL S3D82G05GJL6 51 3090  1000.0 GJ S3D102G063GJ6 145 145 1400  200.0 HL S3D222G05HL6 86 2210  200 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V  1000.0 GJ S3D102G063GJ6 499 1000  460.0 JP S3D461F200JP6 379 1250  200 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V  56.0 GE S3D60F250GE6 3035 263  100.0 GJ S3D101F250GJ6 1593 420  100.0 GJ S3D101F250GJ6 1593 420  100.0 GJ S3D101F250GJ6 1593 420  100.0 JL S3D311F250GJ6 1593 420  100.0 JL S3D311F250GJ6 1593 420  100.0 JL S3D11F250GJ6 1593 520			16 WV <sub>DC</sub> AT	+85 °C, SURGE = 18 V			
25 WV <sub>DC</sub> AT +85 °C, SURGE = 35 V  2800.0 GJ 53D282G025GJ6 103 1650  4300.0 HJ 53D432G025HJ6 72 2170  6200.0 HL 53D622G025HL6 51 2870  11 000.0 JP 53D113G025JP6 33 4230  35 WV <sub>DC</sub> AT +85 °C, SURGE = 45 V  1100.0 GE 53D112G035GE6 219 980  2100.0 GJ 53D212G035GJ6 1111 1590  3200.0 HJ 53D322G035HJ6 77 2090  4700.0 HL 53D472G035HL6 54 2780  8300.0 JP 53D832G035JP6 34 4110  50 WV <sub>DC</sub> AT +85 °C, SURGE = 70 V  1000.0 GE 53D102G050GE6 231 950  1300.0 GJ 53D132G050GJ6 131 1470  1900.0 HJ 53D132G050HJ6 94 1990  2800.0 HJ 53D132G050GJ6 131 1470  1900.0 HJ 53D132G050HJ6 94 1990  2800.0 HL 53D282G050HJ6 51 330  5000.0 JL 53D382G050HJ6 65 2540  3800.0 JL 53D382G050HJ6 65 2540  3800.0 JL 53D282G050HJ6 80 3810  63 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V  1000.0 GJ 53D102G063GJ6 145 1400  2200.0 HL 53D222G063HL6 86 2210  200 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V  350.0 JL 53D22G063HL6 86 2210  200 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V  56.0 GE 53D560F250GE6 3035 263  100.0 JP 53D461F200JP6 379 1250  250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V  56.0 GE 53D560F250GE6 3035 263  100.0 GJ 53D101F250GJ6 1593 420  100.0 GJ 53D101F250GJ6 1593 420  100.0 JL 53D311F250HJ6 1238 520  100.0 JL 53D11F250HJ6 1238 520	6900.0	HJ	53D692G016HJ6	73	2150		
2800.0 GJ 53D282G025GJ6 103 1650  4300.0 HJ 53D432G025HJ6 72 2170  6200.0 HL 53D622G025HL6 51 2870  11 000.0 JP 53D13G05H)6 33 4230  ***Total Company of the Company of th	10 000.0	HL	53D103G016HL6	52	2840		
4300.0 HJ 53D432G025HJ6 72 2170 6200.0 HL 53D622G025HL6 51 2870 11 000.0 JP 53D113G025JP6 33 4230  S3 WV <sub>DC</sub> AT +85 °C, SURGE = 45 V  1100.0 GE 53D112G035GE6 219 980 2200.0 HJ 53D322G035HJ6 77 2090 4700.0 HL 53D472G035HJ6 54 2780 8300.0 JP 53D832G035JP6 34 4110  S5 WV <sub>DC</sub> AT +85 °C, SURGE = 70 V  1000.0 GE 53D102G05GGE6 231 950 1300.0 GJ 53D102G05GGE6 231 950 1300.0 GJ 53D102G05GGE6 231 950 1300.0 HJ 53D322G035HJ6 54 1990 2800.0 HJ 53D32G05GJA6 131 1470 1470.0 HL 53D472G035HJ6 54 2780 1000.0 GE 53D102G05GGE6 231 950 1300.0 GJ 53D132G05GJA6 131 1470 1900.0 HJ 53D192G05GHJ6 65 2540 3800.0 JL 53D382G05GJA6 51 390 2800.0 HL 53D282G05HJ6 65 2540 3800.0 JL 53D382G05GJA6 51 3090 5000.0 JP 53D502G05GJA6 40 3810  63 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V  1000.0 GJ 53D102G05GJA6 145 1400 2200.0 HL 53D222G063HJ6 86 2210  2200.0 HL 53D222G063HJ6 86 2210  2200.0 HL 53D222G063HJ6 86 2210  63 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V  350.0 JL 53D351F200JL6 899 1000 460.0 JP 53D461F200JP6 379 1250  250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V  56.0 GE 53D560F26GE6 3035 263 100.0 GJ 53D101F25GGJ6 1593 420 130.0 HJ 53D131F25GHJ6 1238 520  400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V			25 WV <sub>DC</sub> A1	+85 °C, SURGE = 35 V			
6200.0 HL 53D622G025HL6 51 2870  11 000.0 JP 53D113G025JP6 33 4230  35 WV <sub>DC</sub> AT +85 °C, SURGE = 45 V  1100.0 GE 53D112G035GE6 219 980 2100.0 GJ 53D212G035GJ6 1111 1590 3200.0 HJ 53D322G035HJ6 77 2090 4700.0 HL 53D472G035HL6 54 2780 8300.0 JP 53D832G035JP6 34 4110  55 WV <sub>DC</sub> AT +85 °C, SURGE = 70 V  1000.0 GE 53D102G050GJ6 231 950 1300.0 GJ 53D132G050HJ6 94 1990 2800.0 HJ 53D826G05HL6 65 2540 3800.0 JL 53D382G035HJ6 65 2540 3800.0 JL 53D382G05HJ6 65 2240 3800.0 JL 53D382G05DJ6 51 330 5000.0 JP 53D502G050JP6 40 3810  200 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V  1000.0 GJ 53D102G050JP6 40 3810 2200.0 HL 53D222G05HL6 86 2210  200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V 350.0 JL 53D351F200JL6 86 2210  200 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V  56.0 GE 53D50F20GE6 3035 263 100.0 GJ 53D101F250GJ6 1593 420 130.0 HJ 53D131F250HJ6 1238 520 130.0 JL 53D101F400JL6 1524 560 140.0 JS 53D101F400JL6 1524 560	2800.0	GJ	53D282G025GJ6	103	1650		
11 000.0	4300.0	HJ	53D432G025HJ6	72	2170		
1100.0   GE	6200.0	HL	53D622G025HL6	51	2870		
1100.0   GE	11 000.0	JP	53D113G025JP6	33	4230		
2100.0   GJ   53D212G035GJ6   111   1590   3200.0   HJ   53D322G035HJ6   77   2090   4700.0   HL   53D472G035HL6   54   2780   8300.0   JP   53D832G035JP6   34   4110   50 WV <sub>DC</sub> AT +85 °C, SURGE = 70 V			35 WV <sub>DC</sub> A1	+85 °C, SURGE = 45 V			
3200.0	1100.0	GE	53D112G035GE6	219	980		
4700.0       HL       53D472G035HL6       54       2780         8300.0       JP       53D832G035JP6       34       4110         50 WV <sub>DC</sub> AT +85 °C, SURGE = 70 V         1000.0       GE       53D102G050GE6       231       950         1300.0       GJ       53D132G050GJ6       131       1470         1900.0       HJ       53D192G050HJ6       94       1900         2800.0       HL       53D282G050HL6       65       2540         3800.0       JL       53D382G050JL6       51       3090         5000.0       JP       53D502G050JP6       40       3810         63 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V         1000.0       GJ       53D102G063GJ6       145       1400         2200.0       HL       53D222G063HL6       86       2210         200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V         350.0       JL       53D351F200JL6       499       1000         460.0       JP       53D461F200JP6       379       1250         250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V         56.0       GE       53D560F250GE6       3035       263         100.0       GJ       53D101F250GJ	2100.0	GJ	53D212G035GJ6	111	1590		
8300.0   JP   53D832G035JP6   34   4110	3200.0	HJ	53D322G035HJ6	77	2090		
1000.0   GE	4700.0	HL	53D472G035HL6	54	2780		
1000.0   GE	8300.0	JP	53D832G035JP6	34	4110		
1300.0       GJ       53D132G050GJ6       131       1470         1900.0       HJ       53D192G050HJ6       94       1900         2800.0       HL       53D282G050HL6       65       2540         3800.0       JL       53D382G050JJ6       51       3090         5000.0       JP       53D502G050JP6       40       3810         63 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V         1000.0       GJ       53D102G063GJ6       145       1400         2200.0       HL       53D222G063HL6       86       2210         200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V         350.0       JL       53D351F200JL6       499       1000         460.0       JP       53D461F200JP6       379       1250         250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V         56.0       GE       53D560F250GE6       3035       263         100.0       GJ       53D101F250GJ6       1593       420         130.0       HJ       53D131F250HJ6       1238       520         400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V         100.0       JL       53D101F400JL6       1524       560         140.0       JS       53D101F400J			50 WV <sub>DC</sub> AT	+85 °C, SURGE = 70 V			
1900.0 HJ 53D192G050HJ6 94 1900 2800.0 HL 53D282G050HL6 65 2540 3800.0 JL 53D382G050JL6 51 3090 5000.0 JP 53D502G050JP6 40 3810  63 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V  1000.0 GJ 53D102G063GJ6 145 1400 2200.0 HL 53D222G063HL6 86 2210  200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V  350.0 JL 53D351F200JL6 499 1000 460.0 JP 53D461F200JP6 379 1250  250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V  56.0 GE 53D560F250GE6 3035 263 100.0 GJ 53D101F250GJ6 1593 420 130.0 HJ 53D131F250HJ6 1238 520  400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V	1000.0	GE	53D102G050GE6	231	950		
2800.0 HL 53D282G050HL6 65 2540 3800.0 JL 53D382G050JL6 51 3090 5000.0 JP 53D502G050JP6 40 3810  63 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V  1000.0 GJ 53D102G063GJ6 145 1400 2200.0 HL 53D222G063HL6 86 2210  200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V  350.0 JL 53D351F200JL6 499 1000 460.0 JP 53D461F200JP6 379 1250  250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V  56.0 GE 53D560F250GE6 3035 263 100.0 GJ 53D101F250GJ6 1593 420 130.0 HJ 53D131F250HJ6 1238 520  400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V	1300.0	GJ	53D132G050GJ6	131	1470		
3800.0 JL 53D382G050JL6 51 3090 5000.0 JP 53D502G050JP6 40 3810  63 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V  1000.0 GJ 53D102G063GJ6 145 1400 2200.0 HL 53D222G063HL6 86 2210  200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V  350.0 JL 53D351F200JL6 499 1000 460.0 JP 53D461F200JP6 379 1250  250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V  56.0 GE 53D560F250GE6 3035 263 100.0 GJ 53D101F250GJ6 1593 420 130.0 HJ 53D131F250HJ6 1238 520  400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V  100.0 JL 53D101F400JL6 1524 560 140.0 JS 53D101F400JL6 1524 560	1900.0	HJ	53D192G050HJ6	94	1900		
5000.0         JP         53D502G050JP6         40         3810           63 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V           1000.0         GJ         53D102G063GJ6         145         1400           2200.0         HL         53D222G063HL6         86         2210           200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V           350.0         JL         53D351F200JL6         499         1000           460.0         JP         53D461F200JP6         379         1250           250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V           56.0         GE         53D560F250GE6         3035         263           100.0         GJ         53D101F250GJ6         1593         420           130.0         HJ         53D131F250HJ6         1238         520           400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V           100.0         JL         53D101F400JL6         1524         560           140.0         JS         53D141F400JS6         1084         790	2800.0	HL	53D282G050HL6	65	2540		
63 WV <sub>DC</sub> AT +85 °C, SURGE = 80 V         1000.0       GJ       53D102G063GJ6       145       1400         2200.0       HL       53D222G063HL6       86       2210         200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V         350.0       JL       53D351F200JL6       499       1000         460.0       JP       53D461F200JP6       379       1250         250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V         56.0       GE       53D560F250GE6       3035       263         100.0       GJ       53D101F250GJ6       1593       420         130.0       HJ       53D131F250HJ6       1238       520         400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V         100.0       JL       53D101F400JL6       1524       560         140.0       JS       53D141F400JS6       1084       790	3800.0	JL	53D382G050JL6	51	3090		
1000.0     GJ     53D102G063GJ6     145     1400       2200.0     HL     53D222G063HL6     86     2210       200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V       350.0     JL     53D351F200JL6     499     1000       460.0     JP     53D461F200JP6     379     1250       250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V       56.0     GE     53D560F250GE6     3035     263       100.0     GJ     53D101F250GJ6     1593     420       130.0     HJ     53D131F250HJ6     1238     520       400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V       100.0     JL     53D101F400JL6     1524     560       140.0     JS     53D141F400JS6     1084     790	5000.0	JP	53D502G050JP6	40	3810		
2200.0         HL         53D222G063HL6         86         2210           200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V           350.0         JL         53D351F200JL6         499         1000           460.0         JP         53D461F200JP6         379         1250           250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V           56.0         GE         53D560F250GE6         3035         263           100.0         GJ         53D101F250GJ6         1593         420           130.0         HJ         53D131F250HJ6         1238         520           400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V           100.0         JL         53D101F400JL6         1524         560           140.0         JS         53D141F400JS6         1084         790			63 WV <sub>DC</sub> A1	+85 °C, SURGE = 80 V			
200 WV <sub>DC</sub> AT +85 °C, SURGE = 250 V         350.0       JL       53D351F200JL6       499       1000         460.0       JP       53D461F200JP6       379       1250         250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V         56.0       GE       53D560F250GE6       3035       263         100.0       GJ       53D101F250GJ6       1593       420         130.0       HJ       53D131F250HJ6       1238       520         400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V         100.0       JL       53D101F400JL6       1524       560         140.0       JS       53D141F400JS6       1084       790	1000.0	GJ	53D102G063GJ6	145	1400		
350.0         JL         53D351F200JL6         499         1000           460.0         JP         53D461F200JP6         379         1250           250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V           56.0         GE         53D560F250GE6         3035         263           100.0         GJ         53D101F250GJ6         1593         420           130.0         HJ         53D131F250HJ6         1238         520           400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V           100.0         JL         53D101F400JL6         1524         560           140.0         JS         53D141F400JS6         1084         790	2200.0	HL	53D222G063HL6	86	2210		
460.0     JP     53D461F200JP6     379     1250       250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V       56.0     GE     53D560F250GE6     3035     263       100.0     GJ     53D101F250GJ6     1593     420       130.0     HJ     53D131F250HJ6     1238     520       400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V       100.0     JL     53D101F400JL6     1524     560       140.0     JS     53D141F400JS6     1084     790			200 WV <sub>DC</sub> A1	+85 °C, SURGE = 250 V			
250 WV <sub>DC</sub> AT +85 °C, SURGE = 300 V       56.0     GE     53D560F250GE6     3035     263       100.0     GJ     53D101F250GJ6     1593     420       130.0     HJ     53D131F250HJ6     1238     520       400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V       100.0     JL     53D101F400JL6     1524     560       140.0     JS     53D141F400JS6     1084     790	350.0	JL	53D351F200JL6	499	1000		
56.0         GE         53D560F250GE6         3035         263           100.0         GJ         53D101F250GJ6         1593         420           130.0         HJ         53D131F250HJ6         1238         520           400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V           100.0         JL         53D101F400JL6         1524         560           140.0         JS         53D141F400JS6         1084         790	460.0	JP	53D461F200JP6	379	1250		
100.0     GJ     53D101F250GJ6     1593     420       130.0     HJ     53D131F250HJ6     1238     520       400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V       100.0     JL     53D101F400JL6     1524     560       140.0     JS     53D141F400JS6     1084     790			250 WV <sub>DC</sub> A1	+85 °C, SURGE = 300 V			
130.0 HJ 53D131F250HJ6 1238 520  400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V  100.0 JL 53D101F400JL6 1524 560  140.0 JS 53D141F400JS6 1084 790	56.0	GE	53D560F250GE6	3035	263		
400 WV <sub>DC</sub> AT +85 °C, SURGE = 450 V       100.0     JL     53D101F400JL6     1524     560       140.0     JS     53D141F400JS6     1084     790	100.0	GJ	53D101F250GJ6	1593	420		
100.0     JL     53D101F400JL6     1524     560       140.0     JS     53D141F400JS6     1084     790	130.0	HJ	53D131F250HJ6	1238	520		
140.0 JS 53D141F400JS6 1084 790			400 WV <sub>DC</sub> A1	+85 °C, SURGE = 450 V			
	100.0	JL	53D101F400JL6	1524	560		
150.0 JS 53D151F400JS6 1011 820	140.0	JS	53D141F400JS6	1084	790		
	150.0	JS	53D151F400JS6	1011	820		

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