

Type 300/301 $-55\text{ }^{\circ}\text{C}$ to $105\text{ }^{\circ}\text{C}$ Long-Life, Switching Power Grade Radial

High Capacitance and Ultra-Low ESR



The Types 300 and 301 are the wide-temperature, low-ESR capacitors for power-supply outputs and UPS battery stiffening. The exceptionally low ESRs enable high ripple-current capability. With series inductance of 12 to 16 nH and ripple currents to 16 amps one of these capacitors can save by replacing three or four of the 12.5 mm diameter capacitors routinely at the output of switching power supplies. Type 300 has three leads for rugged, reverse-proof mounting, and Type 301 has two leads. Types 300R and 301R deliver even lower ESR and higher ripple.

Highlights

- 4000 hour load life
- Ripple Current to 16 amps
- ESRs to 6 mΩ
- > 90% capacitance at $-40\text{ }^{\circ}\text{C}$
- Replaces multiple capacitors

Specifications

Operating Temperature:

$-55\text{ }^{\circ}\text{C}$ to $+105\text{ }^{\circ}\text{C}$

Rated Voltage:

6.3 to 250 Vdc

Capacitance:

8.2 μF to 33,000 μF

Capacitance Tolerance:

6.3 to 100 Vdc; $-10 + 75\%$, 160 to 250 Vdc; $-10 + 50\%$

Leakage Current:

$\leq 0.5 \sqrt{CV} \mu\text{A}$, 4 mA max, 5 minutes

Cold Impedance:

$-55\text{ }^{\circ}\text{C}$ multiple of $25\text{ }^{\circ}\text{C}$ $Z \leq 4$ for 6.3 & 7.5 V,
3 for 10 to 50 V, 2 for $> 50\text{ V}$

Ripple Current Multipliers:

Ambient Temperature

45°C	55°C	65°C	75°C	85°C	95°C	105°C
1.66	1.52	1.37	1.20	1.00	0.75	0.36

Frequency

	50 Hz	60 Hz	120 Hz	360 Hz	1 kHz	5 kHz	10 kHz & up
Less than .77" Diameter							
6.3 & 7.5 V	0.76	0.81	1.00	1.23	1.35	1.41	1.43
10 to 40 V	0.74	0.79	1.00	1.29	1.46	1.55	1.57
50V	0.72	0.78	1.00	1.33	1.54	1.67	1.69
63 & 75 V	0.71	0.76	1.00	1.38	1.64	1.82	1.86
100 to 250 V	0.68	0.74	1.00	1.51	2.00	2.51	2.67
.77" Diameter							
6.3 & 7.5 V	0.82	0.86	1.00	1.15	1.21	1.24	1.25
10 to 40 V	0.78	0.83	1.00	1.20	1.30	1.35	1.36
50V	0.76	0.81	1.00	1.25	1.38	1.45	1.47
63 & 75 V	0.74	0.80	1.00	1.28	1.43	1.52	1.54
100 to 250 V	0.76	0.81	1.00	1.24	1.37	1.44	1.46
.895" Diameter							
6.3 & 7.5 V	0.82	0.86	1.00	1.14	1.20	1.23	1.24
10 to 40 V	0.80	0.84	1.00	1.17	1.25	1.29	1.30
50V	0.75	0.80	1.00	1.27	1.42	1.50	1.52
63 & 75 V	0.75	0.80	1.00	1.26	1.40	1.48	1.50
100 to 250 V	0.76	0.81	1.00	1.25	1.38	1.46	1.48
1.02" Diameter							
6.3 & 7.5 V	0.84	0.88	1.00	1.12	1.17	1.19	1.20
10 to 40 V	0.81	0.86	1.00	1.15	1.22	1.25	1.26
50V	0.76	0.81	1.00	1.23	1.35	1.42	1.44
63 & 75 V	0.77	0.81	1.00	1.23	1.35	1.42	1.44
100 to 250 V	0.76	0.81	1.00	1.24	1.37	1.44	1.46

Type 300/301 $-55\text{ }^{\circ}\text{C}$ to $105\text{ }^{\circ}\text{C}$ Long-Life, Switching Power Grade Radial

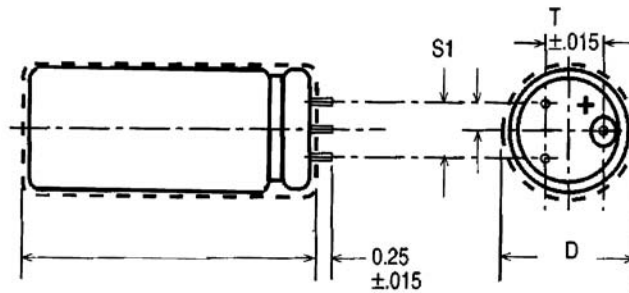
Load Life: 4000 h at full load at $85\text{ }^{\circ}\text{C}$
 Δ capacitance $\pm 20\%$
ESR 200 % of limit
DCL 100 % of limit

Shelf Life: 500 h at $105\text{ }^{\circ}\text{C}$, capacitance, ESR and DCL, initial requirements

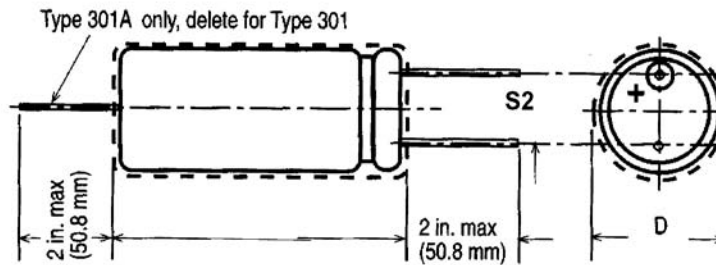
Vibration: 10 to 55 Hz, 0.06" and 10 g max, 2 h each plane

Outline Drawings

0.77", 0.895" and 1.02" Diameters

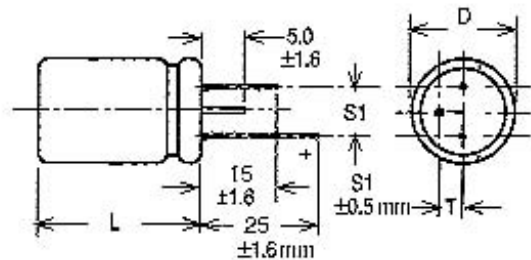


Type 300/300R
Three Leads

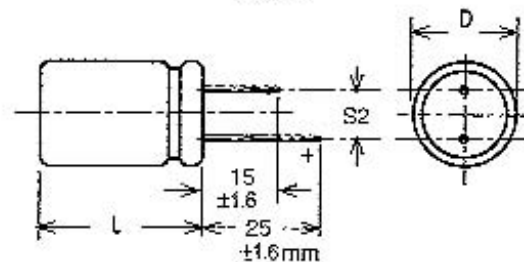


Type 301/301R
Two Leads

0.51", 0.65" and .73" Diameters



Type 300/300R
Three Leads



Type 301/301R
Two Leads

Type 300/301 -55 °C to 105 °C Long-Life, Switching Power Grade Radial

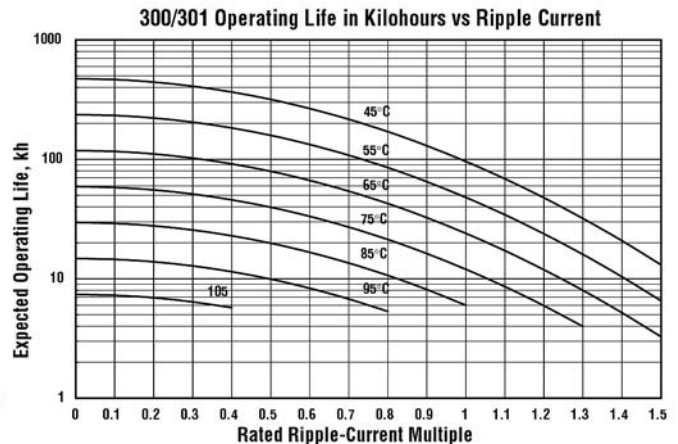
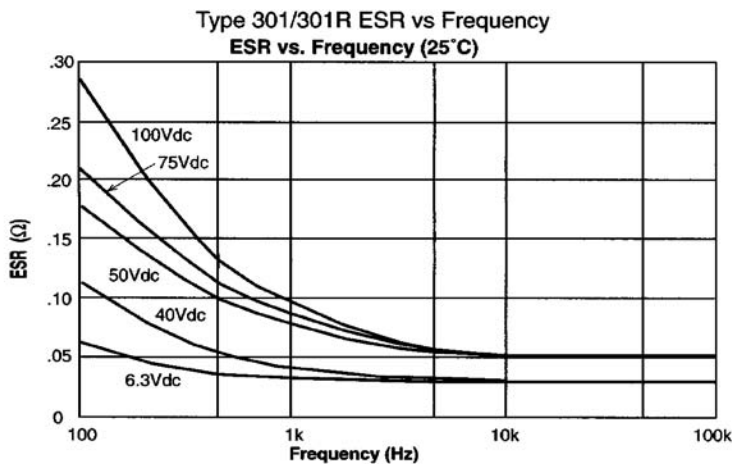
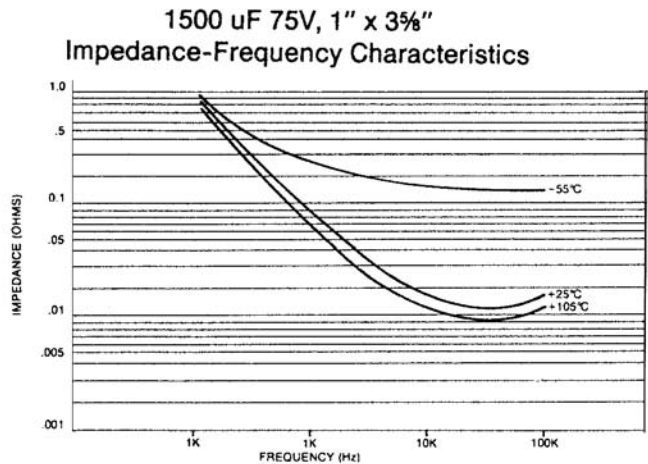
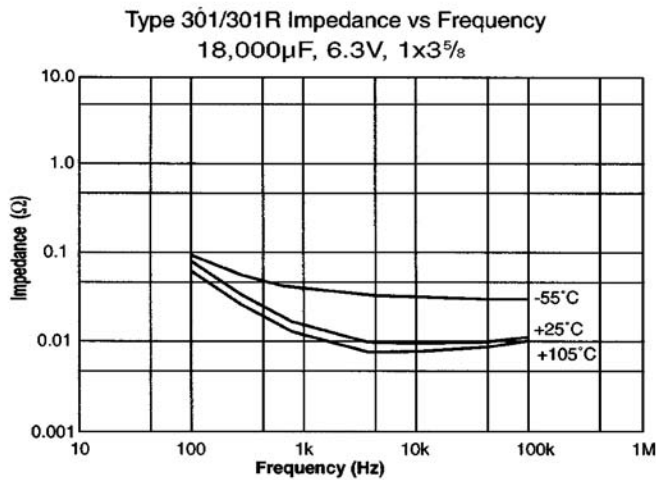
Case Dimensions

Case Code	Insulated D ± 0.015 (0.4 mm) L ± 0.062 (1.6 mm) D x L	Epoxy endseal L Max	Bare Can L D ± 0.015 (0.4 mm) L ± 0.030 (0.8 mm) D x L	Lead Spacing		Lead Diameter dia.	AWG	
				Type 300 S1 ±0.020(0.5 mm)	Type 301 T ±0.020(0.5 mm)			
Case Dimensions in Inches								
EG	.512 x 0.846	0.906	0.492 x 0.787	0.197	0.098	0.197	0.032	20
EK	.512 x 1.043	1.142	0.492 x 0.984	0.197	0.098	0.197	0.032	20
EM	.512 x 1.102	1.161	0.492 x 1.043	0.197	0.098	0.197	0.032	20
EN	.512 x 1.378	1.417	0.492 x 1.319	0.197	0.098	0.197	0.032	20
ER	.512 x 1.732	1.791	0.492 x 1.673	0.197	0.098	0.197	0.032	20
FK	.650 x 1.043	1.098	0.630 x 0.984	0.295	0.148	0.295	0.032	20
FF	.650 x 1.319	1.417	0.630 x 1.260	0.295	0.148	0.295	0.032	20
FQ	.650 x 1.476	1.575	0.630 x 1.417	0.295	0.148	0.295	0.032	20
FV	.650 x 1.634	1.669	0.630 x 1.575	0.295	0.148	0.295	0.032	20
LQ	.728 x 1.476	1.575	0.709 x 1.417	0.295	0.148	0.295	0.032	20
LV	.728 x 1.634	1.693	0.709 x 1.575	0.295	0.148	0.295	0.032	20
GE	.765 x 1.150	1.212	0.750 x 1.125	0.200	0.300	0.300	0.040	18
GJ	.765 x 1.650	1.712	0.750 x 1.625	0.200	0.300	0.300	0.040	18
GL	.765 x 2.150	2.212	0.750 x 2.125	0.200	0.300	0.300	0.040	18
GP	.765 x 2.650	2.712	0.750 x 2.625	0.200	0.300	0.300	0.040	18
GS	.765 x 3.150	3.212	0.750 x 3.125	0.200	0.300	0.300	0.040	18
GT	.765 x 3.650	3.712	0.750 x 3.625	0.200	0.300	0.300	0.040	18
HE	.890 x 1.150	1.212	0.875 x 1.125	0.300	0.400	0.300	0.040	18
HJ	.890 x 1.650	1.712	0.875 x 1.625	0.300	0.400	0.300	0.040	18
HL	.890 x 2.150	2.212	0.875 x 2.125	0.300	0.400	0.300	0.040	18
HP	.890 x 2.650	2.712	0.875 x 2.625	0.300	0.400	0.300	0.040	18
HS	.890 x 3.150	3.212	0.875 x 3.125	0.300	0.400	0.300	0.040	18
HT	.890 x 3.650	3.712	0.875 x 3.625	0.300	0.400	0.300	0.040	18
JE	1.015 x 1.150	1.212	1.000 x 1.125	0.300	0.400	0.400	0.040	18
JJ	1.015 x 1.650	1.712	1.000 x 1.625	0.300	0.400	0.400	0.040	18
JL	1.015 x 2.150	2.212	1.000 x 2.125	0.300	0.400	0.400	0.040	18
JP	1.015 x 2.650	2.712	1.000 x 2.625	0.300	0.400	0.400	0.040	18
JS	1.015 x 3.150	3.212	1.000 x 3.125	0.300	0.400	0.400	0.040	18
JT	1.015 x 3.650	3.712	1.000 x 3.625	0.300	0.400	0.400	0.040	18
Case Dimensions in Millimeters								
EG	13.0 x 21.5	23	12.5 x 20.0	5.00	2.50	5.00	0.81	20
EK	13.0 x 26.5	29.0	12.5 x 25.0	5.00	2.50	5.00	0.81	20
EM	13.0 x 28.0	29.5	12.5 x 26.5	5.00	2.50	5.00	0.81	20
EN	13.0 x 35.0	36.0	12.5 x 33.5	5.00	2.50	5.00	0.81	20
ER	13.0 x 44.0	45.5	12.5 x 42.5	5.00	2.50	5.00	0.81	20
FK	16.5 x 26.5	27.9	16.0 x 25.0	7.50	3.75	7.50	0.81	20
FF	16.5 x 33.5	36.0	16.0 x 32.0	7.50	3.75	7.50	0.81	20
FQ	16.5 x 37.5	40.0	16.0 x 36.0	7.50	3.75	7.50	0.81	20
FV	16.5 x 41.5	42.4	16.0 x 40.0	7.50	3.75	7.50	0.81	20
LQ	18.5 x 37.5	40.0	18.0 x 36.0	7.50	3.75	7.50	0.81	20
LV	18.5 x 41.5	43.0	18.0 x 40.0	7.50	3.75	7.50	0.81	20
GE	19.4 x 29.2	30.8	19.1 x 28.6	5.08	7.62	7.62	1.02	18
GJ	19.4 x 41.9	43.5	19.1 x 41.3	5.08	7.62	7.62	1.02	18
GL	19.4 x 54.6	56.2	19.1 x 54.0	5.08	7.62	7.62	1.02	18
GP	19.4 x 67.3	68.9	19.1 x 66.7	5.08	7.62	7.62	1.02	18
GS	19.4 x 80.0	81.6	19.1 x 79.4	5.08	7.62	7.62	1.02	18
GT	19.4 x 92.7	94.3	19.1 x 92.1	5.08	7.62	7.62	1.02	18
HE	22.6 x 29.2	30.8	22.2 x 28.6	7.62	10.16	7.62	1.02	18
HJ	22.6 x 41.9	43.5	22.2 x 41.3	7.62	10.16	7.62	1.02	18
HL	22.6 x 54.6	56.2	22.2 x 54.0	7.62	10.16	7.62	1.02	18
HP	22.6 x 67.3	68.9	22.2 x 66.7	7.62	10.16	7.62	1.02	18
HS	22.6 x 80.0	81.6	22.2 x 79.4	7.62	10.16	7.62	1.02	18
HT	22.6 x 92.7	94.3	22.2 x 92.1	7.62	10.16	7.62	1.02	18
JE	25.8 x 29.2	30.8	25.4 x 28.6	7.62	10.16	10.16	1.02	18
JJ	25.8 x 41.9	43.5	25.4 x 41.3	7.62	10.16	10.16	1.02	18
HL	25.8 x 54.6	56.2	25.4 x 54.0	7.62	10.16	10.16	1.02	18
JP	25.8 x 67.3	68.9	25.4 x 66.7	7.62	10.16	10.16	1.02	18
JS	25.8 x 80.0	81.6	25.4 x 79.4	7.62	10.16	10.16	1.02	18
JT	25.8 x 92.7	94.3	25.4 x 92.1	7.62	10.16	10.16	1.02	18

Type 300/301 -55°C to 105°C Long-Life, Switching Power Grade Radial Part Numbering System

301R Type 300 - 3 leads 300R - 3 leads, low ESR 301 - 2 leads 301R - 2 leads, low ESR 301A - Laydown 3 leads	333 Capacitance 152 = 1500 μF 102 = 1000 μF	U Tolerance M = $\pm 20\%$ T = 10% +50% U = -10 +75%	6R3 Voltage 6R3 = 6.3 V 063 = 63 Vdc 100 = 100 Vdc	JS Case Code	2 Insulation 0 = bare can 1 = Polyester 2 = PVC 8 = PVC w/standoffs* 9 = Polyester w/standoffs* <small>*Not available in .77" diameter</small>	E Epoxy E = epoxy endseal Blank = no epoxy
--	---	--	--	------------------------------------	---	--

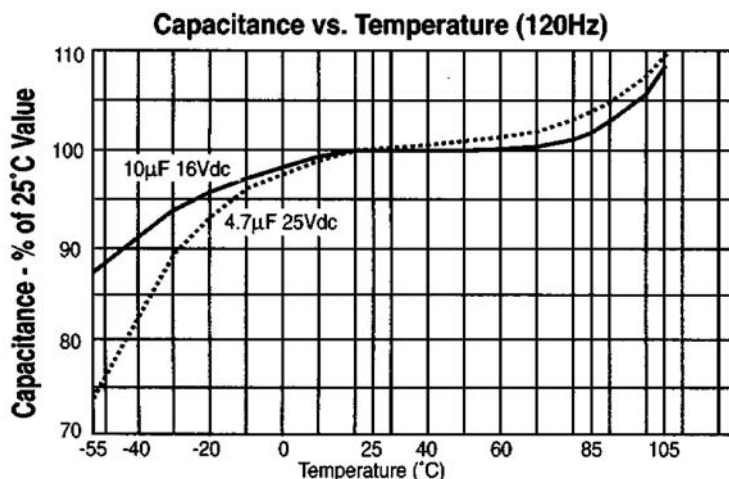
Typical Performance Curves



Type 301/301R Capacitance vs Temperature

Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

Type 301/301R Capacitance vs Temperature



Ratings

RoHS Compliant

Cap. (µF)	Catalog Part Number	ESR MAX @ 25°C 120 Hz 20 kHz (mΩ)	Ripple MAX @ 85°C 120 Hz 20 kHz (mΩ)	Nom Size Insulated D x L (in)	Cap. (µF)	Catalog Part Number	ESR MAX @ 25°C 120 Hz 20 kHz (mΩ)	Ripple MAX @ 85°C 120 Hz 20 kHz (mΩ)	Nom Size Insulated D x L (in)	
6.3 Vdc (9 Vdc Surge)										
680	301681U6R3EM2	231.0	150.0	1.16 1.44	.51 x 1.10	8200	301R822U6R3HJ2	44.3 25.7	3.99 4.93	.895 x 1.65
1000	301102U6R3FK2	160.0	90.0	1.54 2.05	.65 x 1.04	10000	301R103M6R3LV2	54.0 24.0	3.47 5.21	.73 x 1.63
1200	301122U6R3ER2	134.0	70.0	1.78 2.46	.51 x 1.73	10000	301103U6R3GP2	37.8 21.5	5.12 6.39	.77 x 2.65
1500	301R152M6R3EG2	201.0	71.0	1.09 1.84	.51 x .85	10000	301R103U6R3GP2	32.7 18.7	5.50 6.86	.77 x 2.65
1500	301152U6R3FN2	105.0	50.0	2.00 2.90	.65 x 1.32	12000	301123U6R3GS2	31.0 17.7	6.17 7.70	.77 x 3.15
2200	301R222M6R3EM2	110.0	60.0	1.20 1.63	.51 x 1.10	12000	301R123U6R3GS2	26.8 15.3	6.62 8.27	.77 x 3.15
2700	301272U6R3GE2	143.0	81.5	1.71 2.13	.77 x 1.15	12000	301123U6R3HL2	35.0 21.3	5.20 6.27	.895 x 2.15
2700	301R272U6R3GE2	124.0	70.6	1.84 2.29	.77 x 1.15	12000	301R123U6R3HL2	25.5 14.8	6.09 7.54	.895 x 2.15
3300	301R332M6R3EN2	93.0	57.0	1.78 2.28	.51 x 1.38	12000	301123U6R3JJ2	43.0 29.2	4.39 5.02	1.02 x 1.65
3300	301332U6R3LV2	76.0	45.0	2.61 3.39	.73 x 1.63	12000	301R123U6R3JJ2	37.2 21.2	4.72 5.89	1.02 x 1.65
3900	301R392M6R3FK2	111.0	41.0	1.84 3.03	.65 x 1.04	15000	301153U6R3GT2	26.6 15.1	7.10 8.86	.77 x 3.65
3900	301392U6R3HE2	100.0	61.1	2.24 2.71	.895 x 1.15	15000	301R153U6R3GT2	23.0 13.1	7.62 9.52	.77 x 3.65
3900	301R392U6R3HE2	86.8	50.3	2.41 2.98	.895 x 1.15	15000	301153U6R3HP2	27.1 16.5	6.57 7.93	.895 x 2.65
4700	301R472M6R3ER2	68.0	31.0	2.52 3.73	.51 x 1.73	15000	301R153U6R3HP2	19.5 11.3	7.75 9.60	.895 x 2.65
4700	301472U6R3GJ2	72.5	41.3	2.65 3.30	.77 x 1.65	18000	301183U6R3JL2	29.6 20.1	6.08 6.95	1.02 x 2.15
4700	301R472U6R3GJ2	62.8	35.8	2.84 3.55	.77 x 1.65	18000	301R183U6R3JL2	19.1 10.9	7.57 9.45	1.02 x 2.15
5600	301R562M6R3FF2	78.0	37.0	2.43 3.53	.65 x 1.32	22000	301223U6R3HS2	22.4 13.7	7.88 9.51	.895 x 3.15
5600	301562U6R3JE2	83.8	57.0	2.56 2.92	1.02 x 1.15	22000	301R223U6R3HS2	15.9 9.2	9.35 11.60	.895 x 3.15
5600	301R562U6R3JE2	72.7	41.4	2.75 3.43	1.02 x 1.15	22000	301223U6R3JP2	23.0 15.6	7.66 8.75	1.02 x 2.65
6800	301R682M6R3FQ2	71.0	34.0	2.53 3.65	.65 x 1.48	22000	301R223U6R3JP2	14.7 8.4	9.59 12.00	1.02 x 2.65
8200	301R822M6R3FV2	59.0	31.0	3.03 4.18	.65 x 1.65	27000	301273U6R3HT2	19.4 11.9	9.04 10.90	.895 x 3.65
8200	301R822M6R3LQ2	67.0	29.0	2.97 4.51	.73 x 1.48	27000	301R273U6R3HT2	13.6 7.9	10.80 13.40	.895 x 3.65
8200	301822U6R3GL2	49.2	28.1	4.02 5.02	.77 x 2.15	27000	301273U6R3JS2	19.2 13.0	9.11 10.40	1.02 x 3.15
8200	301R822U6R3GL2	42.7	24.3	4.32 5.40	.77 x 2.15	27000	301R273U6R3JS2	15.1 8.6	10.30 12.80	1.02 x 3.15
8200	301822U6R3HJ2	51.1	31.2	3.71 4.48	.895 x 1.65	33000	301333U6R3JT2	16.7 11.4	10.50 12.00	1.02 x 3.65
						33000	301R333U6R3JT2	10.4 5.9	13.30 16.60	1.02 x 3.65

Type 300/301 **-55 °C to 105 °C Long-Life, Switching Power Grade Radial**

Cap. (µF)	Catalog Part Number	ESR MAX @ 25°C		Ripple MAX @ 85°C		Nom Size Insulated D x L (in)
		120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	
470	301471U050LV2	250.0	90.0	1.44	2.40	.73 x 1.63
560	301R561M050FF2	118.0	41.0	1.98	3.36	.65 x 1.32
560	301R561U050GE2	216.0	88.6	1.39	2.05	.77 x 1.15
560	301561U050GE2	249.0	102.0	1.29	1.91	.77 x 1.15
680	301R681M050FQ2	102.0	40.0	2.31	3.69	.65 x 1.48
820	301R821M050FV2	95.0	38.0	2.40	3.79	.65 x 1.63
820	301R821M050LQ2	89.0	36.0	2.59	4.07	.73 x 1.48
1000	301R102M050LV2	77.0	28.0	2.90	4.81	.73 x 1.63
1200	301R122U050GJ2	109.0	44.7	2.16	3.18	.77 x 1.65
1200	301122U050GJ2	126.0	51.6	2.01	2.96	.77 x 1.65
1200	301122U050JE2	130.0	62.4	2.05	2.79	1.02 x 1.15
1200	301R122U050JE2	113.0	43.9	2.21	3.33	1.02 x 1.15
1500	301R152U050GL2	73.4	30.1	3.29	4.85	.77 x 2.15
1500	301152U050GL2	84.7	34.7	3.07	4.52	.77 x 2.15
1800	301182U050HJ2	84.0	34.5	2.89	4.26	.895 x 1.65
1800	301R182U050HJ2	72.8	26.2	3.11	4.89	.895 x 1.65
2200	301R222U050GP2	55.8	22.9	4.21	6.20	.77 x 2.65
2200	301222U050GP2	64.4	26.4	3.92	5.77	.77 x 2.65
2700	301R272U050GS2	45.3	18.6	5.10	7.51	.77 x 3.15
2700	301272U050GS2	52.3	21.4	4.75	6.99	.77 x 3.15
2700	301272U050HL2	56.9	23.3	4.07	6.00	.895 x 2.15
2700	301R272U050HL2	44.5	16.0	4.61	7.24	.895 x 2.15
2700	301272U050JJ2	66.0	31.7	3.54	4.82	1.02 x 1.65
2700	301R272U050JJ2	57.2	22.3	3.81	5.75	1.02 x 1.65
3300	301R332U050GT2	38.4	15.7	5.90	8.69	.77 x 3.65
3300	301332U050GT2	44.3	18.2	5.49	8.09	.77 x 3.65
3300	301332U050HP2	43.5	17.8	5.18	7.63	.895 x 2.65
3300	301R332U050HP2	33.7	12.1	5.89	9.26	.895 x 2.65
3900	301392U050JL2	44.9	21.6	4.93	6.71	1.02 x 2.15
3900	301R392U050JL2	32.4	12.6	5.81	8.77	1.02 x 2.15
4700	301472U050HS2	35.6	14.6	6.25	9.21	.895 x 3.15
4700	301R472U050HS2	27.3	9.8	7.14	11.20	.895 x 3.15
5600	301562U050HT2	30.4	12.5	7.23	10.60	.895 x 3.65
5600	301R562U050HT2	23.1	8.3	8.30	13.00	.895 x 3.65
5600	301562U050JP2	34.5	16.6	6.25	8.50	1.02 x 2.65
5600	301R562U050JP2	24.6	9.6	7.40	11.20	1.02 x 2.65
6800	301682U050JS2	28.4	13.6	7.48	10.20	1.02 x 3.15
6800	301R682U050JS2	20.0	7.8	8.91	13.40	1.02 x 3.15
8200	301822U050JT2	24.4	11.7	8.67	11.80	1.02 x 3.65
8200	301R822U050JT2	17.0	6.6	10.40	15.70	1.02 x 3.65
63 Vdc (90 Vdc Surge)						
120	301R121M063EG2	451.0	93.0	0.73	1.60	.51 x .85
180	301R181M063EK2	298.0	90.0	1.01	1.83	.51 x 1.04
270	301R271M063EN2	160.0	55.0	1.44	2.46	.51 x 1.38
330	301R331M063FK2	171.0	50.0	1.48	2.74	.65 x 1.04
390	301R391M063ER2	130.0	38.0	1.83	3.38	.51 x 1.73
75 Vdc (100 Vdc Surge)						
330	301331U075GE2	360.0	155.0	1.08	1.55	.77 x 1.15
330	301R331U075GE2	312.0	134.0	1.16	1.66	.77 x 1.15
470	301471U075HE2	234.0	108.0	1.47	2.04	.895 x 1.15
470	301R471U075HE2	203.0	87.3	1.57	2.26	.895 x 1.15

Cap. (µF)	Catalog Part Number	ESR MAX @ 25°C		Ripple MAX @ 85°C		Nom Size Insulated D x L (in)
		120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	
390	301391U063GE2	281.0	92.7	1.22	2.00	.77 x 1.15
390	301R391U063GE2	243.0	80.3	1.31	2.15	.77 x 1.15
470	301R471M063FF2	142.0	43.0	1.80	3.27	.65 x 1.32
560	301R561M063FQ2	120.0	35.0	2.05	3.80	.65 x 1.48
680	301R681M063FV2	113.0	32.0	2.06	3.87	.65 x 1.65
680	301R681M063LQ2	103.0	29.0	2.21	4.17	.73 x 1.48
680	301681U063HE2	185.0	70.5	1.65	2.52	.895 x 1.15
680	301R681U063HE2	161.0	53.0	1.77	2.90	.895 x 1.15
820	301R821M063LV2	90.0	29.0	2.69	4.74	.73 x 1.63
820	301821U063GJ2	142.0	46.7	1.89	3.11	.77 x 1.65
820	301R821U063GJ2	123.0	40.5	2.03	3.34	.77 x 1.65
1000	301102U063JE2	144.0	63.2	1.95	2.78	1.02 x 1.15
1000	301R102U063JE2	124.0	43.5	2.10	3.34	1.02 x 1.15
1200	301122U063GL2	95.2	31.4	2.89	4.75	.77 x 2.15
1200	301R122U063GL2	82.5	27.2	3.11	5.10	.77 x 2.15
1200	301122U063HJ2	93.8	35.6	2.74	4.19	.895 x 1.65
1200	301R122U063HJ2	81.3	26.8	2.94	4.83	.895 x 1.65
1500	301152U063GP2	72.3	23.8	3.70	6.07	.77 x 2.65
1500	301R152U063GP2	62.6	20.7	3.97	6.52	.77 x 2.65
1800	301182U063HL2	63.4	24.1	3.86	5.90	.895 x 2.15
1800	301R182U063HL2	50.1	16.5	4.34	7.13	.895 x 2.15
1800	301182U063JJ2	72.8	32.0	3.37	4.80	1.02 x 1.65
1800	301R182U063JJ2	63.1	22.1	3.62	5.78	1.02 x 1.65
2200	301222U063GS2	58.6	19.3	4.48	7.36	.77 x 3.15
2200	301R222U063GS2	50.8	16.8	4.82	7.90	.77 x 3.15
2200	301222U063GT2	49.6	16.4	5.19	8.53	.77 x 3.65
2200	301R222U063GT2	43.0	14.2	5.58	9.16	.77 x 3.65
2700	301272U063HP2	48.4	18.4	4.92	7.52	.895 x 2.65
2700	301R272U063HP2	37.9	12.5	5.55	9.11	.895 x 2.65
2700	301272U063JL2	49.5	21.8	4.70	6.68	1.02 x 2.15
2700	301R272U063JL2	36.3	12.7	5.48	8.74	1.02 x 2.15
3300	301332U063HS2	39.5	15.0	5.94	9.08	.895 x 3.15
3300	301R332U063HS2	30.7	10.1	6.73	11.10	.895 x 3.15
3900	301392U063HT2	33.7	12.8	6.87	10.50	.895 x 3.65
3900	301R392U063HT2	25.9	8.5	7.84	12.90	.895 x 3.65
3900	301392U063JP2	37.9	16.7	5.96	8.47	1.02 x 2.65
3900	301R392U063JP2	27.6	9.7	6.99	11.10	1.02 x 2.65
4700	301472U063JS2	31.1	13.7	7.15	10.20	1.02 x 3.15
4700	301R472U063JS2	22.4	7.8	8.42	13.40	1.02 x 3.15
5600	301562U063JT2	26.7	11.7	8.30	11.80	1.02 x 3.65
5600	301R562U063JT2	19.0	6.6	9.83	15.70	1.02 x 3.65

Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

Cap. (µF)	Catalog Part Number	ESR MAX @ 25°C 120 Hz 20 kHz (mΩ)		Ripple MAX @ 85°C 120 Hz 20 kHz (mΩ)		Nom Size Insulated D x L (in)	Cap. (µF)	Catalog Part Number	ESR MAX @ 25°C 120 Hz 20 kHz (mΩ)		Ripple MAX @ 85°C 120 Hz 20 kHz (mΩ)		Nom Size Insulated D x L (in)
560	301561U075GJ2	181.0	77.8	1.67	2.41	.77 x 1.65	270	301R271U100GJ2	252.0	95.9	1.42	2.17	.77 x 1.65
560	301R561U075GJ2	157.0	67.4	1.80	2.59	.77 x 1.65	330	301331U100LQ2	249.0	55.0	0.81	2.94	.73 x 1.48
680	301681U075JE2	178.0	88.8	1.76	2.34	1.02 x 1.15	330	301331U100JE2	273.0	109.0	1.42	2.11	1.02 x 1.15
680	301R681U075JE2	154.0	67.7	1.89	2.68	1.02 x 1.15	330	301R331U100JE2	237.0	92.3	1.52	2.30	1.02 x 1.15
1000	301102U075GL2	122.0	52.3	2.56	3.68	.77 x 2.15	390	301391U100LV2	210.0	47.0	0.87	3.35	.73 x 1.63
1000	301R102U075GL2	105.0	45.3	2.75	3.95	.77 x 2.15	470	301471U100GL2	195.0	74.1	2.02	3.09	.77 x 2.15
1000	301102U075HJ2	118.0	54.3	2.44	3.39	.895 x 1.65	470	301R471U100GL2	169.0	64.3	2.17	3.32	.77 x 2.15
1000	301R102U075HJ2	102.0	44.0	2.62	3.77	.895 x 1.65	470	301471U100HJ2	186.0	70.8	1.94	2.97	.895 x 1.65
1200	301122U075GP2	92.0	39.5	3.28	4.71	.77 x 2.65	470	301R471U100HJ2	162.0	61.4	2.09	3.19	.895 x 1.65
1200	301R122U075GP2	79.7	34.3	3.52	5.06	.77 x 2.65	560	301561U100GP2	147.0	55.9	2.59	3.96	.77 x 2.65
1500	301152U075GS2	74.4	32.0	3.98	5.72	.77 x 3.15	560	301R561U100GP2	128.0	48.5	2.78	4.26	.77 x 2.65
1500	301R152U075GS2	64.4	27.7	4.27	6.15	.77 x 3.15	680	301681U100GS2	119.0	45.0	3.15	4.82	.77 x 3.15
1500	301152U075HL2	79.7	36.6	3.44	4.79	.895 x 2.15	680	301R681U100GS2	103.0	39.0	3.39	5.18	.77 x 3.15
1500	301R152U075HL2	64.2	27.6	3.84	5.52	.895 x 2.15	680	301681U100HL2	125.0	47.6	2.75	4.20	.895 x 2.15
1500	301152U075JJ2	89.9	44.9	3.04	4.05	1.02 x 1.65	680	301R681U100HL2	104.0	39.4	3.02	4.62	.895 x 2.15
1500	301R152U075JJ2	77.9	34.3	3.26	4.64	1.02 x 1.65	680	301681U100JJ2	138.0	55.1	2.45	3.66	1.02 x 1.65
1800	301182U075GT2	62.7	27.0	4.62	6.64	.77 x 3.65	680	301R681U100JJ2	119.0	46.5	2.64	3.98	1.02 x 1.65
1800	301R182U075GT2	54.3	23.4	4.96	7.13	.77 x 3.65	820	301821U100GT2	99.5	37.8	3.67	5.61	.77 x 3.65
2200	301222U075HP2	60.6	27.9	4.39	6.11	.895 x 2.65	820	301R821U100GT2	86.2	32.8	3.94	6.02	.77 x 3.65
2200	301R222U075HP2	48.5	20.9	4.91	7.06	.895 x 2.65	1000	301102U100HP2	94.7	36.0	3.51	5.38	.895 x 2.65
2200	301222U075JL2	60.8	30.4	4.24	5.65	1.02 x 2.15	1000	301R102U100HP2	78.1	29.7	3.87	5.92	.895 x 2.65
2200	301R222U075JL2	46.2	20.3	4.86	6.91	1.02 x 2.15	1000	301102U100JL2	92.7	37.1	3.43	5.12	1.02 x 2.15
2700	301272U075HS2	49.2	22.6	5.32	7.39	.895 x 3.15	1000	301R102U100JL2	73.8	28.8	3.85	5.81	1.02 x 2.15
2700	301R272U075HS2	39.1	16.8	5.96	8.57	.895 x 3.15	1200	301122U100HS2	76.5	29.1	4.26	6.52	.895 x 3.15
2700	301272U075HT2	41.8	19.2	6.17	8.58	.895 x 3.65	1200	301R122U100HS2	62.8	23.9	4.71	7.20	.895 x 3.15
2700	301R272U075HT2	32.9	14.2	6.95	9.99	.895 x 3.65	1200	301122U100HT2	64.5	24.5	4.96	7.59	.895 x 3.65
2700	301272U075JP2	46.4	23.2	5.39	7.18	1.02 x 2.65	1200	301R122U100HT2	52.6	20.0	5.50	8.41	.895 x 3.65
2700	301R272U075JP2	35.0	15.4	6.21	8.82	1.02 x 2.65	1200	301122U100JP2	70.3	28.1	4.38	6.53	1.02 x 2.65
3300	301332U075JS2	37.9	19.0	6.47	8.63	1.02 x 3.15	1200	301R122U100JP2	55.7	21.7	4.92	7.43	1.02 x 2.65
3300	301R332U075JS2	28.3	12.5	7.49	10.60	1.02 x 3.15	1500	301152U100JS2	57.0	22.8	5.28	7.87	1.02 x 3.15
3900	301392U075JT2	32.4	16.2	7.53	10.00	1.02 x 3.65	1500	301R152U100JS2	44.9	17.5	5.95	8.99	1.02 x 3.15
3900	301R392U075JT2	23.9	10.5	8.76	12.40	1.02 x 3.65	2200	301222U100JT2	48.3	19.3	6.17	9.19	1.02 x 3.65
100 Vdc (140 Vdc Surge)							160 Vdc (200 Vdc Surge)						
47	301470U100EG2	1770.0	345.0	0.38	0.74	.51 x .85	15	301150U160EG2	17500.0	1450.0	0.12	0.40	.51 x .85
68	301680U100EM2	1160.0	183.0	0.42	1.10	.51 x 1.10	22	301220U160EK2	12800.0	960.0	0.14	0.52	.51 x 1.04
100	301101U100EN2	756.0	149.0	0.52	1.37	.51 x 1.38	27	301270U160EM2	9700.0	720.0	0.18	0.66	.51 x 1.10
120	301121U100FK2	686.0	139.0	0.55	1.48	.65 x 1.04	39	301390U160EN2	6210.0	600.0	0.23	0.74	.51 x 1.38
150	301151U100ER2	519.0	104.0	0.61	1.83	.51 x 1.73	47	301470U160FK2	6000.0	620.0	0.23	0.70	.65 x 1.04
150	301151U100GE2	581.0	221.0	0.85	1.30	.77 x 1.15	56	301560U160ER2	5110.0	500.0	0.28	0.89	.51 x 1.73
150	301R151U100GE2	503.0	191.0	0.91	1.39	.77 x 1.15	56	301560T160GE2	1817.0	690.0	0.48	0.73	.77 x 1.15
180	301181U100FF2	450.0	93.0	0.64	2.00	.65 x 1.32	68	301680U160FF2	3500.0	350.0	0.36	1.15	.65 x 1.32
220	301221U100FQ2	365.0	76.0	0.69	2.31	.65 x 1.48	82	301820U160FQ2	2950.0	320.0	0.50	1.53	.65 x 1.48
220	301221U100HE2	371.0	141.0	1.16	1.78	.895 x 1.15	82	301820T160HE2	1169.0	444.0	0.66	1.00	.895 x 1.15
220	301R221U100HE2	321.0	122.0	1.25	1.91	.895 x 1.15	100	301101U160LQ2	2540.0	210.0	0.47	1.65	.73 x 1.48
270	301271U100FV2	298.0	63.0	0.75	2.64	.65 x 1.65	100	301101T160GJ2	1019.0	387.0	0.71	1.08	.77 x 1.65
270	301271U100GJ2	291.0	111.0	1.32	2.02	.77 x 1.65							

Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

Cap. (μF)	Catalog Part Number	ESR MAX @ 25°C		Ripple MAX @ 85°C		Nom Size Insulated D x L (in)
		120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	
120	301121U160LV2	2010.0	190.0	0.55	1.79	.73 x 1.63
120	301121T160JE2	904.0	362.0	0.78	1.16	1.02 x 1.15
150	301151T160GL2	608.0	231.0	1.15	1.75	.77 x 2.15
180	301181T160HJ2	586.0	222.0	1.10	1.68	.895 x 1.65
220	301221T160GP2	457.0	174.0	1.47	2.25	.77 x 2.65
270	301271T160GS2	366.0	139.0	1.79	2.74	.77 x 3.15
270	301271T160HL2	391.0	149.0	1.55	2.38	.895 x 2.15
270	301271T160JJ2	415.0	166.0	1.41	2.11	1.02 x 1.65
330	301331T160GT2	306.0	116.0	2.09	3.20	.77 x 3.65
390	301391T160HP2	268.0	102.0	2.09	3.19	.895 x 2.65
390	301391T160JL2	278.0	111.0	1.98	2.95	1.02 x 2.15
470	301471T160HS2	226.0	85.7	2.48	3.80	.895 x 3.15
470	301471T160JP2	228.0	91.4	2.43	3.62	1.02 x 2.65
560	301561T160HT2	189.0	71.8	2.90	4.44	.895 x 3.65
560	301561T160JS2	184.0	73.5	2.94	4.39	1.02 x 3.15
680	301681T160JT2	154.0	61.6	3.45	5.15	1.02 x 3.65
200 Vdc (250 Vdc Surge)						
10	301100U200EG2	19900.0	1780.0	0.12	0.39	.51 x .85
15	301150U200EK2	15200.0	1270.0	0.14	0.49	.51 x 1.04
18	301180U200EM2	10600.0	960.0	0.19	0.63	.51 x 1.10
22	301220U200EN2	7010.0	580.0	0.22	0.75	.51 x 1.38
27	301270U200FK2	6500.0	650.0	0.22	0.68	.65 x 1.04
33	301330U200ER2	5990.0	550.0	0.26	0.87	.51 x 1.73
39	301390U200FF2	3910.0	340.0	0.34	1.15	.65 x 1.32
47	301470U200FQ2	3730.0	330.0	0.45	1.50	.65 x 1.48
56	301560U200FV2	3250.0	290.0	0.47	1.58	.65 x 1.65
56	301560T200GE2	2285.0	1051.0	0.43	0.59	.77 x 1.15
68	301680U200LQ2	2840.0	260.0	0.53	1.74	.73 x 1.48
82	301820U200LV2	2310.0	180.0	0.53	1.89	.73 x 1.63
82	301820T200HE2	1423.0	655.0	0.59	0.83	.895 x 1.15
100	301101T200GJ2	1144.0	526.0	0.67	0.93	.77 x 1.65
120	301121T200JE2	1012.0	465.0	0.74	1.02	1.02 x 1.15
150	301151T200GL2	763.0	351.0	1.02	1.42	.77 x 2.15
180	301181T200HJ2	713.0	328.0	0.99	1.38	.895 x 1.65
220	301221T200GP2	574.0	264.0	1.31	1.82	.77 x 2.65
220	301221T200JJ2	507.0	233.0	1.28	1.78	1.02 x 1.65
270	301271T200GS2	460.0	212.0	1.60	2.22	.77 x 3.15
270	301271T200HL2	476.0	219.0	1.41	1.96	.895 x 2.15

Cap. (μF)	Catalog Part Number	ESR MAX @ 25°C		Ripple MAX @ 85°C		Nom Size Insulated D x L (in)
		120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	120 Hz 20 kHz (mΩ)	
330	301331T200GT2	384.0	177.0	1.87	2.59	.77 x 3.65
330	301331T200HP2	358.0	165.0	1.81	2.51	.895 x 2.65
390	301391T200HS2	288.0	132.0	2.20	3.06	.895 x 3.15
390	301391T200JL2	339.0	156.0	1.79	2.49	1.02 x 2.15
470	301471T200HT2	240.0	111.0	2.57	3.57	.895 x 3.65
470	301471T200JP2	255.0	117.0	2.30	3.19	1.02 x 2.65
560	301561T200JS2	205.0	94.4	2.78	3.87	1.02 x 3.15
680	301681T200JT2	172.0	79.1	3.27	4.54	1.02 x 3.65
250 Vdc (300 Vdc Surge)						
8.2	3018R2U250EG2	29900.0	3050.0	0.07	0.23	.51 x .85
12	301120U250EK2	23300.0	2500.0	0.09	0.27	.51 x 1.04
15	301150U250EM2	15000.0	1900.0	0.14	0.38	.51 x 1.10
18	301180U250EN2	12100.0	1500.0	0.17	0.47	.51 x 1.38
27	301270U250FK2	10800.0	1610.0	0.20	0.53	.65 x 1.04
27	301270U250ER2	7820.0	1390.0	0.28	0.67	.51 x 1.73
33	301330U250FF2	5500.0	720.0	0.29	0.80	.65 x 1.32
39	301390U250FQ2	5260.0	700.0	0.32	0.89	.65 x 1.48
39	301390T250GE2	2708.0	1137.0	0.39	0.57	.77 x 1.15
47	301470U250FV2	4680.0	670.0	0.38	1.00	.65 x 1.65
56	301560U250LQ2	3750.0	550.0	0.42	1.10	.73 x 1.48
68	301680U250LV2	3110.0	360.0	0.44	1.29	.73 x 1.63
68	301680T250HE2	1684.0	707.0	0.55	0.79	.895 x 1.15
82	301820T250GJ2	1355.0	569.0	0.61	0.89	.77 x 1.65
100	301101T250JE2	1194.0	502.0	0.68	0.99	1.02 x 1.15
120	301121T250GL2	905.0	380.0	0.94	1.37	.77 x 2.15
120	301121T250HJ2	843.0	354.0	0.91	1.33	.895 x 1.65
150	301151T250GP2	679.0	285.0	1.21	1.75	.77 x 2.65
180	301181T250JJ2	598.0	251.0	1.18	1.71	1.02 x 1.65
220	301221T250GS2	544.0	229.0	1.47	2.14	.77 x 3.15
220	301221T250HL2	563.0	237.0	1.30	1.88	.895 x 2.15
270	301271T250GT2	455.0	191.0	1.72	2.50	.77 x 3.65
270	301271T250HP2	423.0	178.0	1.66	2.42	.895 x 2.65
270	301271T250JL2	400.0	168.0	1.65	2.40	1.02 x 2.15
330	301331T250HS2	340.0	143.0	2.02	2.94	.895 x 3.15
390	301391T250HT2	284.0	119.0	2.37	3.44	.895 x 3.65
390	301391T250JP2	301.0	126.0	2.12	3.08	1.02 x 2.65
470	301471T250JS2	242.0	102.0	2.56	3.73	1.02 x 3.15
560	301561T250JT2	202.0	85.0	3.01	4.38	1.02 x 3.65