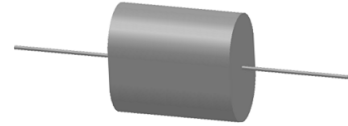


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IGBT Snubber, AC Filter, DC Filter, Power Resoance

❖General Description

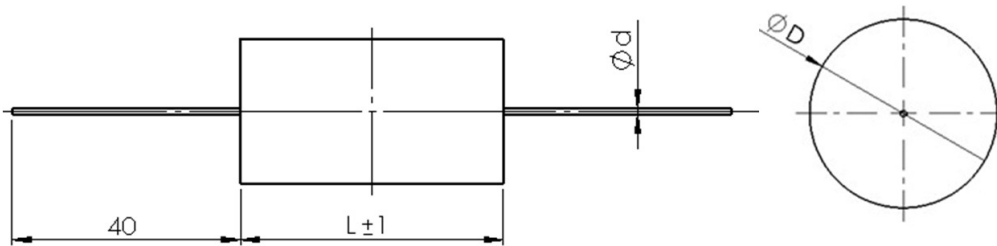


Standard Reference	IEC 61071
Climatic Category	40 / 85 / 56
Max . Altitude	Self-Healing Metallized Polypropylene
Dielectric Material	Polyester tape, Resin filled, UL94V-0
Terminals Type,
Capacitance Range	Cn: 0.005μF ~ 10.0μF (1kHz , 20°C)
Capacitance Tolerance	J (±5%), K(±10%)
Dissipation Factor	tg δ: ≤ 0.0006 (1kHz , 20°C)
Insulation Resistance	IR x Cn : ≥30000s but need not exceed 30GW (100Vdc, 60s, 20°C)
Rated Voltage	Un : 300VDC ~ 4000VDC
Test voltage U _{TR}	U _{TR} : 1.5Un (10s , 20°C)-Test voltage between both terminals
Test voltage U _{TC}	U _{TC} : 3000Vac (10s , 20°C)-Test voltage between terminals with case
Operating Temperature	- 40°C ~ 85°C
Storage Temperature	- 40°C ~ 85°C
Lifetime Expectancy	100,000 hours (Un , 70°C)
Applications	IGBT Snubber , AC Filter, DC Filter , Power Resoance
Remarks	RoHs Compliant on request. Add "R" to p/n. * Other capacitance, voltage and dimensions are available on request.

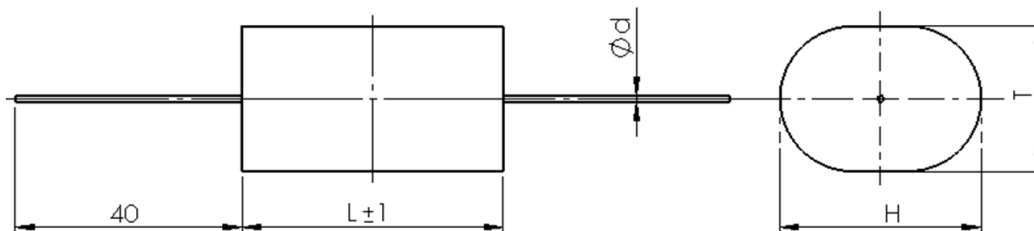
❖Outline Drawing

Unit: mm

Style A : Round



Style B : Oval Flat



❖ **Electrical Characteristics**

USM86 Series

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Part Number	Cn	Un	ESL	dv/dt	I Peak	Irms max.	Dimension (mm)					
	μF	Vdc	nH	V/μs	Amps	A	Style A:Round		Style B:Oval flat			Ød
							ØD	L	L	T	H	
<i>Un 700VDC , Urms 400VAC</i>												
USM86-154J700#32	0.15	700	20	500	75	4	11	32	-	-	-	1.0
USM86-224J700#32	0.22	700	20	500	110	5	13	32	-	-	-	1.0
USM86-334J700#32	0.33	700	20	500	165	6	15	32	32	11	18	1.0
USM86-474J700#32	0.47	700	20	500	235	8	17	32	32	13	21	1.0
USM86-564J700#32	0.56	700	20	500	280	9	19	32	32	14	23	1.0
USM86-684J700#32	0.68	700	20	500	340	10	20	32	32	15	25	1.0
USM86-824J700#32	0.82	700	20	500	410	12	22	32	32	17	27	1.2
USM86-105J700#32	1.0	700	20	500	500	12	24	32	32	19	29	1.2
USM86-684J700#44	0.68	700	24	400	272	9	17	44	44	12	21	1.0
USM86-105J700#44	1.0	700	24	400	400	10	19	44	44	14	23	1.0
USM86-125J700#44	1.2	700	24	400	480	11	21	44	44	16	25	1.2
USM86-155J700#44	1.5	700	24	400	600	12	23	44	44	18	28	1.2
USM86-205J700#44	2.0	700	24	400	800	14	27	44	44	22	31	1.2
USM86-225J700#44	2.2	700	24	400	880	14	28	44	44	23	32	1.2
USM86-255J700#44	2.5	700	24	400	1000	14	30	44	44	25	35	1.2
USM86-305J700#44	3.0	700	24	400	1200	14	32	44	44	28	38	1.2
USM86-335J700#44	3.3	700	24	400	1320	14	34	44	44	29	39	1.2
USM86-355J700#44	3.5	700	24	400	1400	14	35	44	44	30	40	1.2
USM86-205J700#57	2.0	700	28	300	600	14	23	57	57	18	27	1.2
USM86-305J700#57	3.0	700	28	300	900	14	28	57	57	23	32	1.2
USM86-405J700#57	4.0	700	28	300	1200	14	32	57	57	27	36	1.2
USM86-475J700#57	4.7	700	28	300	1410	14	34	57	57	30	39	1.2
USM86-505J700#57	5.0	700	28	300	1500	14	35	57	57	30	40	1.2
USM86-565J700#57	5.6	700	28	300	1680	14	37	57	57	33	42	1.2
USM86-685J700#57	6.8	700	28	300	2040	14	40	57	57	37	46	1.2
USM86-855J700#57	8.5	700	28	300	2550	14	42	57	57	38	48	1.2
USM86-106J700#57	10	700	28	300	3000	14	45	57	57	42	51	1.2

❖ **Electrical Characteristics**

USM86 Series

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Part Number	Cn	Un	ESL	dv/dt	I Peak	Irms max.	Dimension (mm)					Ød
	µF	Vdc	nH	V/µs	Amps		Style A:Round		Style B:Oval flat			
						ØD	L	L	T	H		
Un 850VDC , Urms 450VAC												
USM86-154J850#32	0.15	850	20	700	105	5	12	32	-	-	-	1.0
USM86-224J850#32	0.22	850	20	700	154	6	15	32	-	-	-	1.0
USM86-334J850#32	0.33	850	20	700	231	7	17	32	32	14	20	1.0
USM86-474J850#32	0.47	850	20	700	329	8	20	32	32	15	24	1.0
USM86-564J850#32	0.56	850	20	700	392	9	22	32	32	16	26	1.0
USM86-684J850#32	0.68	850	20	700	476	10	24	32	32	18	28	1.0
USM86-824J850#32	0.82	850	20	700	574	12	26	32	32	21	30	1.2
USM86-105J850#32	1.0	850	20	700	700	13	28	32	32	23	33	1.2
USM86-125J850#32	1.2	850	20	700	840	14	31	32	32	26	35	1.2
USM86-155J850#32	1.5	850	20	700	1050	14	34	32	32	30	40	1.2
USM86-474J850#44	0.47	850	24	450	211.5	9	17	44	44	11	20	1.0
USM86-564J850#44	0.56	850	24	450	252	9.5	18	44	44	12	22	1.0
USM86-684J850#44	0.68	850	24	450	306	10	20	44	44	14	24	1.0
USM86-824J850#44	0.82	850	24	450	369	11	21	44	44	16	25	1.2
USM86-105J850#44	1.0	850	24	450	450	12	23	44	44	18	27	1.2
USM86-125J850#44	1.2	850	24	450	540	14	25	44	44	20	29	1.2
USM86-155J850#44	1.5	850	24	450	675	14	28	44	44	23	32	1.2
USM86-205J850#44	2.0	850	24	450	900	14	32	44	44	27	36	1.2
USM86-225J850#44	2.2	850	24	450	990	14	33	44	44	29	38	1.2
USM86-255J850#44	2.5	850	24	450	1125	14	35	44	44	31	40	1.2
USM86-205J850#57	2.0	850	28	350	700	14	25	57	57	20	30	1.2
USM86-225J850#57	2.2	850	28	350	770	14	26	57	57	21	31	1.2
USM86-255J850#57	2.5	850	28	350	875	14	28	57	57	23	32	1.2
USM86-305J850#57	3.0	850	28	350	1050	14	30	57	57	25	35	1.2
USM86-405J850#57	4.0	850	28	350	1400	14	35	57	57	30	40	1.2
USM86-475J850#57	4.7	850	28	350	1645	14	38	57	57	33	42	1.2
USM86-505J850#57	5.0	850	28	350	1750	14	39	57	57	34	44	1.2
USM86-565J850#57	5.6	850	28	350	1960	14	41	57	57	36	46	1.2
USM86-685J850#57	6.8	850	28	350	2380	14	45	57	57	41	50	1.2

❖ **Electrical Characteristics**

USM86 Series

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Part Number	Cn	Un	ESL	dv/dt	I Peak	Irms max.	Dimension (mm)					
	μF	Vdc	nH	V/μs	Amps	A	Style A:Round		Style B:Oval flat			Ød
							ØD	L	L	T	H	
<i>Un 1200VDC , Urms 500VAC</i>												
USM86-104J1200#32	0.1	1200	20	1200	120	5	12	32	-	-	-	1.0
USM86-154J1200#32	0.15	1200	20	1200	180	6	15	32	32	11	17	1.0
USM86-224J1200#32	0.22	1200	20	1200	264	9	17	32	32	14	20	1.0
USM86-334J1200#32	0.33	1200	20	1200	396	10	21	32	32	16	25	1.0
USM86-474J1200#32	0.47	1200	20	1200	564	12	25	32	32	20	29	1.2
USM86-564J1200#32	0.56	1200	20	1200	672	13	27	32	32	22	32	1.2
USM86-684J1200#32	0.68	1200	20	1200	816	14	30	32	32	25	34	1.2
USM86-824J1200#32	0.82	1200	20	1200	984	14	33	32	32	28	38	1.2
USM86-105J1200#32	1.0	1200	20	1200	1200	14	36	32	32	31	41	1.2
USM86-154J1200#44	0.15	1200	24	700	105	5	13	44	-	-	-	1.0
USM86-224J1200#44	0.22	1200	24	700	154	6	15	44	-	-	-	1.0
USM86-334J1200#44	0.33	1200	24	700	231	9	18	44	44	12	22	1.0
USM86-474J1200#44	0.47	1200	24	700	329	10	21	44	44	15	25	1.0
USM86-564J1200#44	0.56	1200	24	700	392	12	22	44	44	17	26	1.0
USM86-684J1200#44	0.68	1200	24	700	476	13	24	44	44	19	29	1.2
USM86-824J1200#44	0.82	1200	24	700	574	14	26	44	44	21	31	1.2
USM86-105J1200#44	1.0	1200	24	700	700	14	29	44	44	24	34	1.2
USM86-125J1200#44	1.2	1200	24	700	840	14	32	44	44	27	36	1.2
USM86-155J1200#44	1.5	1200	24	700	1050	14	35	44	44	30	40	1.2
USM86-205J1200#44	2.0	1200	24	700	1400	14	40	44	44	36	45	1.2
USM86-225J1200#44	2.2	1200	24	700	1540	14	42	44	44	38	47	1.2
USM86-255J1200#44	2.5	1200	24	700	1750	14	43	44	44	39	48	1.2
USM86-105J1200#57	1.0	1200	28	450	450	12	25	57	57	20	29	1.2
USM86-155J1200#57	1.5	1200	28	450	675	14	30	57	57	25	34	1.2
USM86-205J1200#57	2.0	1200	28	450	900	14	32	57	57	28	38	1.2
USM86-225J1200#57	2.2	1200	28	450	990	14	34	57	57	29	38	1.2
USM86-255J1200#57	2.5	1200	28	450	1125	14	36	57	57	31	41	1.2
USM86-305J1200#57	3.0	1200	28	450	1350	14	37	57	57	32	42	1.2
USM86-405J1200#57	4.0	1200	28	450	1800	14	42	57	57	38	47	1.2

❖ **Electrical Characteristics**

USM86 Series

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Part Number	Cn	Un	ESL	dv/dt	I Peak	Irms max.	Dimension (mm)					
	µF	Vdc	nH	V/µs	Amps	A	Style A:Round		Style B:Oval flat			Ød
							ØD	L	L	T	H	
<i>Un 1600VDC , Urms 600VAC</i>												
USM86-104J1600#32	0.1	1600	20	1400	140	6	13	32	32	10	16	1.0
USM86-154J1600#32	0.15	1600	20	1400	210	8	16	32	32	13	19	1.0
USM86-224J1600#32	0.22	1600	20	1400	308	10	19	32	32	16	22	1.0
USM86-334J1600#32	0.33	1600	20	1400	462	12	23	32	32	18	28	1.2
USM86-474J1600#32	0.47	1600	20	1400	658	13	28	32	32	23	32	1.2
USM86-564J1600#32	0.56	1600	20	1400	784	14	30	32	32	25	34	1.2
USM86-684J1600#32	0.68	1600	20	1400	952	14	33	32	32	28	38	1.2
USM86-824J1600#32	0.82	1600	20	1400	1148	14	36	32	32	31	41	1.2
USM86-105J1600#32	1.0	1600	20	1400	1400	14	39	32	32	35	44	1.2
USM86-104J1600#44	0.1	1600	24	900	90	5	12	44	-	-	-	1.0
USM86-154J1600#44	0.15	1600	24	900	135	6	14	44	-	-	-	1.0
USM86-224J1600#44	0.22	1600	24	900	198	7	16	44	44	11	20	1.0
USM86-334J1600#44	0.33	1600	24	900	297	9	19	44	44	14	23	1.0
USM86-474J1600#44	0.47	1600	24	900	423	11	22	44	44	17	27	1.2
USM86-564J1600#44	0.56	1600	24	900	504	13	24	44	44	19	29	1.2
USM86-684J1600#44	0.68	1600	24	900	612	14	27	44	44	22	31	1.2
USM86-824J1600#44	0.82	1600	24	900	738	14	29	44	44	24	34	1.2
USM86-105J1600#44	1.0	1600	24	900	900	14	32	44	44	27	37	1.2
USM86-125J1600#44	1.2	1600	24	900	1080	14	35	44	44	30	40	1.2
USM86-155J1600#44	1.5	1600	24	900	1350	14	39	44	44	34	44	1.2
USM86-474J1600#57	0.47	1600	28	650	305.5	10	19	57	57	14	23	1.2
USM86-824J1600#57	0.82	1600	28	650	533	13	25	57	57	20	30	1.2
USM86-105J1600#57	1.0	1600	28	650	650	14	27	57	57	22	31	1.2
USM86-125J1600#57	1.2	1600	28	650	780	14	30	57	57	24	34	1.2
USM86-155J1600#57	1.5	1600	28	650	975	14	33	57	57	28	38	1.2
USM86-205J1600#57	2.0	1600	28	650	1300	14	37	57	57	33	43	1.2
USM86-225J1600#57	2.2	1600	28	650	1430	14	39	57	57	35	45	1.2
USM86-255J1600#57	2.5	1600	28	650	1625	14	42	57	57	38	47	1.2
USM86-285J1600#57	2.8	1600	28	650	1820	14	44	57	57	40	49	1.2

❖ **Electrical Characteristics**

USM86 Series

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Part Number	Cn	Un	ESL	dv/dt	I Peak	Irms max.	Dimension (mm)					
	µF	Vdc	nH	V/µs	Amps		Style A:Round		Style B:Oval flat			Ød
						ØD	L	L	T	H		
<i>Un 2000VDC , Urms 650VAC</i>												
USM86-473J2000#32	0.047	2000	20	1800	84.6	5	11	32	-	-	-	1.0
USM86-683J2000#32	0.068	2000	20	1800	122.4	6	12	32	-	-	-	1.0
USM86-104J2000#32	0.1	2000	20	1800	180	7	14	32	32	11	18	1.0
USM86-154J2000#32	0.15	2000	20	1800	270	9	17	32	32	14	21	1.0
USM86-224J2000#32	0.22	2000	20	1800	396	12	21	32	32	18	24	1.2
USM86-334J2000#32	0.33	2000	20	1800	594	14	26	32	32	21	30	1.2
USM86-474J2000#32	0.47	2000	20	1800	846	14	30	32	32	25	35	1.2
USM86-564J2000#32	0.56	2000	20	1800	1008	14	33	32	32	28	38	1.2
USM86-684J2000#32	0.68	2000	20	1800	1224	14	36	32	32	31	41	1.2
USM86-824J2000#32	0.82	2000	20	1800	1476	14	39	32	32	35	44	1.2
USM86-105J2000#32	1.0	2000	20	1800	1800	14	43	32	32	39	49	1.2
USM86-104J2000#44	0.1	2000	24	1100	110	7	13	44	-	-	-	1.0
USM86-154J2000#44	0.15	2000	24	1100	165	8	15	44	-	-	-	1.0
USM86-224J2000#44	0.22	2000	24	1100	242	9	18	44	44	12	21	1.0
USM86-334J2000#44	0.33	2000	24	1100	363	10	21	44	44	16	25	1.2
USM86-474J2000#44	0.47	2000	24	1100	517	13	25	44	44	20	29	1.2
USM86-564J2000#44	0.56	2000	24	1100	616	14	27	44	44	22	31	1.2
USM86-684J2000#44	0.68	2000	24	1100	748	14	29	44	44	24	34	1.2
USM86-824J2000#44	0.82	2000	24	1100	902	14	32	44	44	27	37	1.2
USM86-105J2000#44	1.0	2000	24	1100	1100	14	35	44	44	30	40	1.2
USM86-125J2000#44	1.2	2000	24	1100	1320	14	38	44	44	34	43	1.2
USM86-155J2000#44	1.5	2000	24	1100	1650	14	43	44	44	38	48	1.2
USM86-474J2000#57	0.47	2000	28	700	329	10	21	57	57	16	25	1.2
USM86-824J2000#57	0.82	2000	28	700	574	14	27	57	57	22	32	1.2
USM86-105J2000#57	1.0	2000	28	700	700	14	30	57	57	25	34	1.2
USM86-125J2000#57	1.2	2000	28	700	840	14	32	57	57	28	37	1.2
USM86-155J2000#57	1.5	2000	28	700	1050	14	36	57	57	31	41	1.2
USM86-205J2000#57	2.0	2000	28	700	1400	14	41	57	57	37	47	1.2
USM86-225J2000#57	2.2	2000	28	700	1540	14	43	57	57	39	48	1.2

❖ **Electrical Characteristics**

USM86 Series

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Part Number	Cn	Un	ESL	dv/dt	I Peak	Irms max.	Dimension (mm)					
	μF	Vdc	nH	V/μs	Amps	A	Style A:Round		Style B:Oval flat			Ød
							ØD	L	L	T	H	
Un 3000VDC , Urms 750VAC												
USM86-473J3000#32	0.047	3000	20	2700	127	7	15	32	32	10	19	1.0
USM86-683J3000#32	0.068	3000	20	2700	184	8	17	32	32	12	21	1.0
USM86-104J3000#32	0.1	3000	20	2700	270	10	20	32	32	15	25	1.2
USM86-154J3000#32	0.15	3000	20	2700	405	12	25	32	32	20	29	1.2
USM86-224J3000#32	0.22	3000	20	2700	594	14	30	32	32	25	34	1.2
USM86-334J3000#32	0.33	3000	20	2700	891	14	36	32	32	32	41	1.2
USM86-104J3000#44	0.1	3000	24	1500	150	9	17	44	44	11	21	1.0
USM86-154J3000#44	0.15	3000	24	1500	225	10	20	44	44	15	24	1.2
USM86-224J3000#44	0.22	3000	24	1500	330	12	24	44	44	19	28	1.2
USM86-334J3000#44	0.33	3000	24	1500	495	13	29	44	44	24	34	1.2
USM86-474J3000#44	0.47	3000	24	1500	705	14	34	44	44	30	39	1.2
USM86-224J3000#57	0.22	3000	28	800	176	9	20	57	57	15	24	1.2
USM86-334J3000#57	0.33	3000	28	800	264	11	25	57	57	19	29	1.2
USM86-474J3000#57	0.47	3000	28	800	376	13	29	57	57	24	33	1.2
USM86-564J3000#57	0.56	3000	28	800	448	14	31	57	57	27	36	1.2
USM86-684J3000#57	0.68	3000	28	800	544	14	35	57	57	30	39	1.2
USM86-824J3000#57	0.82	3000	28	800	656	14	38	57	57	33	43	1.2
USM86-105J3000#57	1.0	3000	28	800	800	14	42	57	57	37	47	1.2
Un 4000VDC , Urms 1200VAC												
USM86-473J4000#57	0.047	4000	35	3000	141	9	26	57	57	21	30	1.2
USM86-683J4000#57	0.068	4000	35	3000	204	11	32	57	57	26	35	1.2
USM86-823J4000#57	0.082	4000	35	3000	246	12	35	57	57	29	38	1.2
USM86-104J4000#57	0.1	4000	35	3000	300	13	38	57	57	42	32	1.2

*Other capacitance , voltage and dimension are available on request.

ΔVersion: 2016-1.0

❖ **Part Number System**

EX: USM86-474J1200B44

USM86	-	474		J		1200		B		44
⋮		⋮		⋮		⋮		⋮		⋮
Series		Capacitance		Tolerance		Voltage		Style		L
		474=0.47μF		J=±5%		VDC		A=Round		Length
		105=1.0μF		K=±10%				B=Oval Flat		