



電気二重層キャパシタ

Electric Double Layer Capacitors



TOSHIN KOGYO CO.,LTD.

●電気二重層キャパシタ / ELECTRIC DOUBLE LAYER CAPACITORS

DCV series

■ 特徴/FEATURES

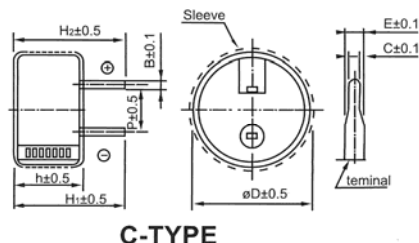
- ・急速充放電回路に最適です。
Quic charge and discharge
- ・コンピュータ及び周辺機器に最適です。
Computer & peripherals
- ・DLCモデム及びルータに最適です。
DLC modems & routers
- ・自動メータ読取器に最適です。
Automatic meter reader



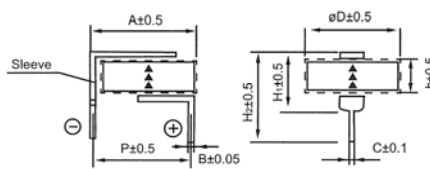
■ 性能/PERFORMANCE SPECIFICATIONS

定格電圧	RATED VOLTAGE	5.5V
使用温度範囲	OPERATING TEMPERATURE RANGE	-25°C ~ +70°C
サージ電圧	SURGE VOLTAGE	6.0V
静電容量範囲	CAPACITANCE RANGE	0.1 ~ 1.5F
静電容量許容差 (25°C)	CAPACITANCE TOLERANCE (25°C)	-20 ~ +80%
温度特性 -25 ~ +70°C	TEMPERATURE CHARACTERISTICS -25 ~ +70°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温負荷特性 70°C, 定格電圧印加 1000時間	HIGH TEMPERATURE LOADED APPLICATION OF RATED VOLTAGE AT 70°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 4 TIMES OF THE INITIAL SPECIFIDE VALUE
高温保存特性 70°C 1000時間	HIGH TEMPERATURE STRAGE STRAGE AT 70°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 4 TIMES OF THE INITIAL SPECIFIDE VALUE

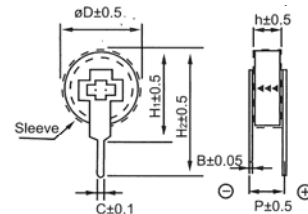
■ 形状/SHAPE



C-TYPE



H-TYPE



V-TYPE

■ 定格・寸法/RATING AND DIMENSIONS

W.V. SHAPE	Cap. (F)	ESR _{AC} (Ω)	LC (mA)	Size (mm)								P/N
				D	h	P	H1	H2	B	C	E	
5.5V (5R5) C-TYPE	0.1	75	0.003	13.5	7.0	5.0	12.5	13.5	0.4	0.8	1.2	5R5DCV104ZVC135007E
	0.22	75	0.003	13.5	7.0	5.0	12.5	13.5	0.4	0.8	1.2	5R5DCV224ZVC135007E
	0.33	50	0.005	13.5	7.0	5.0	12.5	13.5	0.4	0.8	1.2	5R5DCV334ZVC135007E
	0.47	50	0.005	13.5	7.0	5.0	12.5	13.5	0.4	0.8	1.2	5R5DCV474ZVC135007E
	1.0	30	0.008	20.5	7.5	5.0	12.0	12.5	0.4	0.8	1.2	5R5DCV105ZVC205007E
	1.5	30	0.008	20.5	7.5	5.0	12.0	12.5	0.4	0.8	1.2	5R5DCV155ZVC205007E

W.V. SHAPE	Cap. (F)	ESR _{AC} (Ω)	LC (mA)	Size (mm)							P/N	
				D	h	P	H1	H2	A	B		C
5.5V (5R5) H-TYPE	0.1	75	0.003	11.5	4.5	10	6	9	12.5	0.2	0.8	5R5DCV104ZVH115004E
	0.22	75	0.003	11.5	4.5	10	6	9	12.5	0.2	0.8	5R5DCV224ZVH115004E
	0.33	50	0.005	11.5	4.5	10	6	9	12.5	0.2	0.8	5R5DCV334ZVH115004E
	0.47	50	0.005	11.5	4.5	10	6	9	12.5	0.2	0.8	5R5DCV474ZVH190004E
	1.0	30	0.008	19	4.5	20	7	9.5	20	0.2	1.0	5R5DCV105ZVH190004E
	1.5	30	0.008	19	4.5	20	7	9.5	20	0.2	1.0	5R5DCV155ZVH190004E

W.V. SHAPE	Cap. (F)	ESR _{AC} (Ω)	LC (mA)	Size (mm)							P/N
				D	h	P	H1	H2	B	C	
5.5V (5R5) V-TYPE	0.1	75	0.003	11.5	4.5	5	13	16.5	0.2	0.8	5R5DCV104ZVV115004E
	0.22	75	0.003	11.5	4.5	5	13	16.5	0.2	0.8	5R5DCV224ZVV115004E
	0.33	50	0.005	11.5	4.5	5	13	16.5	0.2	0.8	5R5DCV334ZVV115004E
	0.47	50	0.005	11.5	4.5	5	13	16.5	0.2	0.8	5R5DCV474ZVV115004E
	1.0	30	0.008	19	4.5	5	20.5	25.5	0.2	0.8	5R5DCV105ZVV190004E
	1.5	30	0.008	19	4.5	5	20.5	25.5	0.2	0.8	5R5DCV155ZVV190004E

 Cap.: 25°C ESR_{AC}: 1kHz LC(Leakage current): 72hrs

●電気二重層キャパシタ / ELECTRIC DOUBLE LAYER CAPACITORS

DVQ series

■ 特徴/FEATURES

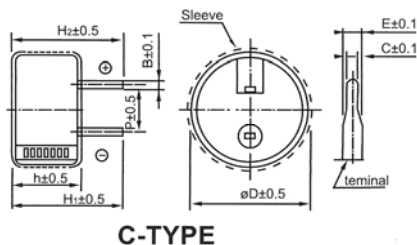
- ・急速充放電回路に最適で、+85°C対応品です。
Quic charge and discharge, High temperature product
- ・コンピュータ及び周辺機器に最適です。
Computer & peripherals
- ・DLCモデム及びルータに最適です。
DLC modems & routers
- ・自動メータ読取器に最適です。
Automatic meter reader



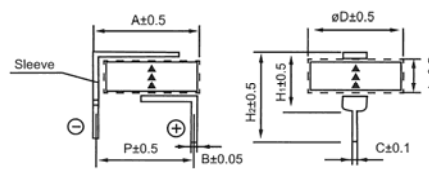
■ 性能/PERFORMANCE SPECIFICATIONS

定格電圧	RATED VOLTAGE	5.5V
使用温度範囲	OPERATING TEMPERATURE RANGE	-25°C ~ +85°C
サージ電圧	SURGE VOLTAGE	6.0V
静電容量範囲	CAPACITANCE RANGE	0.1 ~ 1.5F
静電容量許容差 (25°C)	CAPACITANCE TOLERANCE (25°C)	-20 ~ +80%
温度特性 -25 ~ +85°C	TEMPERATURE CHARACTERISTICS -25 ~ +85°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温負荷特性 85°C, 定格電圧印加 1000時間	HIGH TEMPERATURE LOADED APPLICATION OF RATED VOLTAGE AT 85°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 4 TIMES OF THE INITIAL SPECIFIDE VALUE
高温保存特性 85°C 1000時間	HIGH TEMPERATURE STRAGE STRAGE AT 85°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 4 TIMES OF THE INITIAL SPECIFIDE VALUE

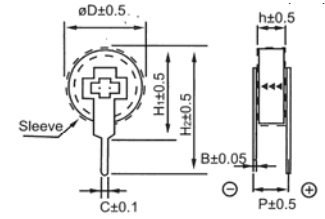
■ 形状/SHAPE



C-TYPE



H-TYPE



V-TYPE

■ 定格・寸法/RATING AND DIMENSIONS

W.V. SHAPE	Cap. (F)	ESR _{AC} (Ω)	LC (mA)	Size (mm)								P/N
				D	h	P	H1	H2	B	C	E	
5.5V (5R5) C-TYPE	0.1	75	0.003	13.5	7.0	5.0	12.5	13.5	0.4	0.8	1.2	5R5DVQ104ZVC135007E
	0.22	75	0.003	13.5	7.0	5.0	12.5	13.5	0.4	0.8	1.2	5R5DVQ224ZVC135007E
	0.33	50	0.005	13.5	7.0	5.0	12.5	13.5	0.4	0.8	1.2	5R5DVQ334ZVC135007E
	0.47	50	0.005	13.5	7.0	5.0	12.5	13.5	0.4	0.8	1.2	5R5DVQ474ZVC135007E
	1.0	30	0.008	20.5	7.5	5.0	12.0	12.5	0.4	0.8	1.2	5R5DVQ105ZVC205007E
	1.5	30	0.008	20.5	7.5	5.0	12.0	12.5	0.4	0.8	1.2	5R5DVQ155ZVC205007E

W.V. SHAPE	Cap. (F)	ESR _{AC} (Ω)	LC (mA)	Size (mm)								P/N
				D	h	P	H1	H2	A	B	C	
5.5V (5R5) H-TYPE	0.1	75	0.005	11.5	4.5	10	6	9	12.5	0.2	0.8	5R5DVQ104ZVH115004E
	0.22	75	0.005	11.5	4.5	10	6	9	12.5	0.2	0.8	5R5DVQ224ZVH115004E
	0.33	50	0.008	11.5	4.5	10	6	9	12.5	0.2	0.8	5R5DVQ334ZVH115004E
	0.47	50	0.008	11.5	4.5	10	6	9	12.5	0.2	0.8	5R5DVQ474ZVH190004E
	1.0	30	0.010	19	4.5	20	7	9.5	20	0.2	1.0	5R5DVQ105ZVH190004E
	1.5	30	0.010	19	4.5	20	7	9.5	20	0.2	1.0	5R5DVQ155ZVH190004E

W.V. SHAPE	Cap. (F)	ESR _{AC} (Ω)	LC (mA)	Size (mm)								P/N
				D	h	P	H1	H2	B	C	-	
5.5V (5R5) V-TYPE	0.1	75	0.005	11.5	4.5	5	13	16.5	0.2	0.8	5R5DVQ104ZVV115004E	
	0.22	75	0.005	11.5	4.5	5	13	16.5	0.2	0.8	5R5DVQ224ZVV115004E	
	0.33	50	0.008	11.5	4.5	5	13	16.5	0.2	0.8	5R5DVQ334ZVV115004E	
	0.47	50	0.008	11.5	4.5	5	13	16.5	0.2	0.8	5R5DVQ474ZVV115004E	
	1.0	30	0.010	19	4.5	5	20.5	25.5	0.2	0.8	5R5DVQ105ZVV190004E	
	1.5	30	0.010	19	4.5	5	20.5	25.5	0.2	0.8	5R5DVQ155ZVV190004E	

 Cap.: 25°C ESR_{AC}: 1kHz LC(Leakage current): 72hrs

●電気二重層キャパシタ / ELECTRIC DOUBLE LAYER CAPACITORS

DRP series

■ 特徴/FEATURES

- ・低ESRで、低温度対応品です。
Lower ESR, Low temperature
- ・家電製品に最適です。
Consumer electronic
- ・パルス電源に最適です。
Pulse power
- ・ホールドアップ電源に最適です。
Hold-up power

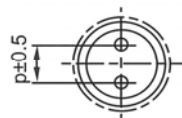
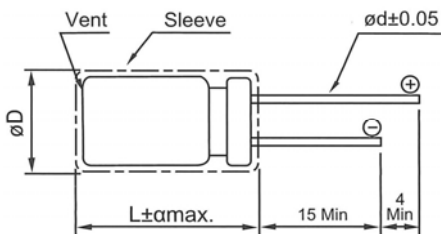


■ 性能/PERFORMANCE SPECIFICATIONS

定格電圧	RATED VOLTAGE	2.7V
使用温度範囲	OPERATING TEMPERATURE RANGE	-40°C ~ +65°C (-40°C ~ +85°C:2.3V)
サージ電圧	SURGE VOLTAGE	2.85V
静電容量範囲	CAPACITANCE RANGE	1 ~ 100F
静電容量許容差 (25°C)	CAPACITANCE TOLERANCE (25°C)	-10 ~ +30%
温度特性 -40 ~ +65°C	TEMPERATURE CHARACTERISTICS -40 ~ +65°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温負荷特性 65°C, 定格電圧印加 1000時間	HIGH TEMPERATURE LOADED APPLICATION OF RATED VOLTAGE AT 65°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温保存特性 65°C 1000時間	HIGH TEMPERATURE STRAGE STRAGE AT 65°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
サイクル寿命 定格電圧⇔定格電圧/2 500,000サイクル/25°C	CYCLE LIFE RATED VOLTAGE ⇔ RATED VOLTAGE/2 500,000cycles/25°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE

■ 形状/SHAPE

(mm)



φD	8	10	12	12.5	16	18
P	3.5	5.0		7.5		
φd	0.6	0.6		0.8		
α	1.5	2.0				

■ 定格・寸法/RATING AND DIMENSIONS

W.V.	Cap. 25°C (F)	Impedance		Leakage current (72hrs) (mA)	Size φD×L (mm)	Weight (g)	P/N
		ESR _{DC} (mΩ)	ESR _{AC} 1kHz (mΩ)				
2.7V (2R7)	1	400	250	0.008	8×14	0.8	2R7DRP105QRH080014E
	2	250	130	0.010	8×14	1	2R7DRP205QRH080014E
	3	150	80	0.012	8×20	1.4	2R7DRP305QRH080020E
	3.5	150	80	0.014	8×20	1.5	2R7DRP355QRH080020E
	5	130	70	0.016	10×20	2.1	2R7DRP505QRH100020E
	7	80	55	0.020	10×25	2.3	2R7DRP705QRH100025E
	10	60	40	0.030	10×30	3.2	2R7DRP106QRH100030E
	10	60	40	0.030	12.5×25	3.5	2R7DRP106QRH125025E
	25	35	25	0.080	16×25	7	2R7DRP256QRH160025E
	50	22	15	0.140	18×40	12.8	2R7DRP506QRH180040E
	60	22	15	0.140	18×40	13	2R7DRP606QRH180040E
	70	20	14	0.160	18×50	15	2R7DRP706QRH180050E
100	18	12	0.180	18×60	20	2R7DRP107QRH180060E	

●電気二重層キャパシタ / ELECTRIC DOUBLE LAYER CAPACITORS

DRE series

■ 特 徴/FEATURES

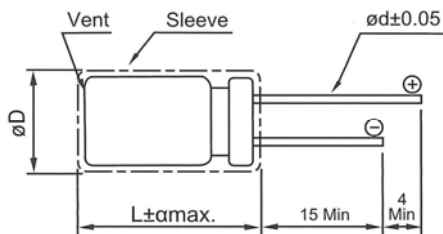
- ・3V対応で、広温度対応品です。
High voltage, Wide temperature range
- ・家電製品に最適です。
Consumer electronic
- ・パルス電源に最適です。
Pulse power
- ・ホールドアップ電源に最適です。
Hold-up power



■ 性 能/PERFORMANCE SPECIFICATIONS

定格電圧	RATED VOLTAGE	3V
使用温度範囲	OPERATING TEMPERATURE RANGE	-40°C ~ +65°C (-40°C ~ +85°C:2.5V)
サージ電圧	SURGE VOLTAGE	3.2V
静電容量範囲	CAPACITANCE RANGE	3 ~ 50F
静電容量許容差 (25°C)	CAPACITANCE TOLERANCE (25°C)	-10 ~ +30%
温度特性 -40 ~ +65°C	TEMPERATURE CHARACTERISTICS -40 ~ +65°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温負荷特性 65°C, 定格電圧印加 1000時間	HIGH TEMPERATURE LOADED APPLICATION OF RATED VOLTAGE AT 65°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温保存特性 65°C 1000時間	HIGH TEMPERATURE STRAGE STRAGE AT 65°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
サイクル寿命 定格電圧 ⇔ 定格電圧/2 500,000サイクル/25°C	CYCLE LIFE RATED VOLTAGE ⇔ RATED VOLTAGE/2 500,000cycles/25°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE

■ 形 状/SHAPE



(mm)

φD	8	10	16	18
P	3.5	5.0	7.5	
φd	0.6	0.6	0.8	
α	1.5	2.0		

■ 定格・寸法/RATING AND DIMENSIONS

W.V.	Cap. 25°C (F)	Impedance		Leakage current (72hrs) (mA)	Size φD × L (mm)	Weight (g)	P/N
		ESR _{DC} (mΩ)	ESR _{AC} 1kHz (mΩ)				
3V (3R0)	3	150	80	0.013	8 × 20	1.4	3R0DRE305QRH080020E
	5	130	70	0.018	10 × 20	2.1	3R0DRE505QRH100020E
	7	80	55	0.025	10 × 25	2.3	3R0DRE705QRH100025E
	10	60	40	0.040	10 × 30	3.2	3R0DRE106QRH100030E
	25	35	25	0.080	16 × 25	7	3R0DRE256QRH160025E
	50	22	15	0.150	18 × 40	12.8	3R0DRE506QRH180040E

●電気二重層キャパシタ / ELECTRIC DOUBLE LAYER CAPACITORS

DSP series

■ 特徴/FEATURES

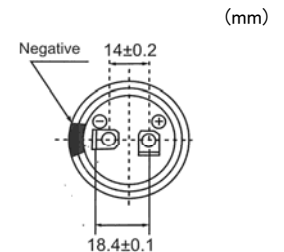
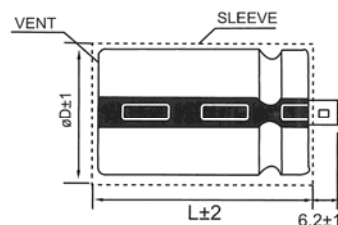
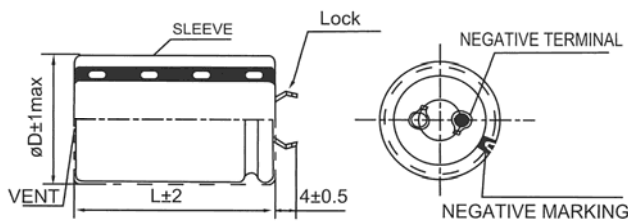
- ・低ESR、低温度対応品です。
Lower ESR, Low temperature
- ・電子機器に最適です。
Electronic tools
- ・ポータブル電動工具に最適です。
Portable power tools
- ・無停電電源、バックアップ電源に最適です。
UPS and back power supply



■ 性能/PERFORMANCE SPECIFICATIONS

定格電圧	RATED VOLTAGE	2.7V
使用温度範囲	OPERATING TEMPERATURE RANGE	-40°C ~ +65°C (-40°C ~ +85°C:2.3V)
サージ電圧	SURGE VOLTAGE	2.85V
静電容量範囲	CAPACITANCE RANGE	100 ~ 470F
静電容量許容差 (25°C)	CAPACITANCE TOLERANCE (25°C)	-10 ~ +30%
温度特性 -40 ~ +65°C	TEMPERATURE CHARACTERISTICS -40 ~ +65°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温負荷特性 65°C, 定格電圧印加 1500時間	HIGH TEMPERATURE LOADED APPLICATION OF RATED VOLTAGE AT 65°C, 1500hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温保存特性 65°C 1000時間	HIGH TEMPERATURE STRAGE STRAGE AT 65°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
サイクル寿命 定格電圧⇔定格電圧/2 500,000サイクル/25°C	CYCLE LIFE RATED VOLTAGE ⇔ RATED VOLTAGE/2 500,000cycles/25°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE

■ 形状/SHAPE



■ 定格・寸法/RATING AND DIMENSIONS

W.V.	Cap. 25°C (F)	Impedance		Leakage current (72hrs) (mA)	Size φ D × L (mm)	Weight (g)	P/N
		ESR _{DC} (mΩ)	ESR _{AC} 1kHz (mΩ)				
2.7V (2R7)	100	12	8	0.3	22 × 45	20	2R7DPS107QSD220045E
	200	10	6	0.7	30 × 50	36	2R7DPS207QSD300050E
	350	3.5	3	1.0	35 × 60	64	2R7DPS357QSL350060E
	400	3.2	2.8	1.0	35 × 60	70	2R7DPS407QSL350060E
	470	3.5	3	1.3	35 × 60	75	2R7DPS477QSL350060E

●電気二重層キャパシタ / ELECTRIC DOUBLE LAYER CAPACITORS

DSE series

■ 特 徴/FEATURES

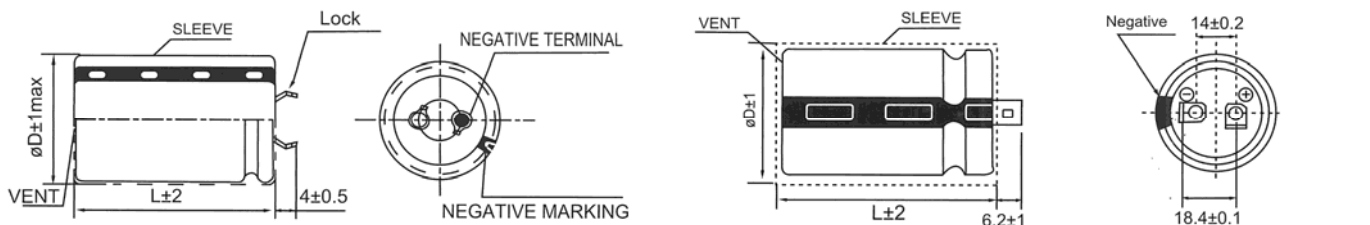
- ・3V対応、広温度範囲対応品です。
High voltage product, Wider temperature range
- ・電子機器に最適です。
Electronic tools
- ・ポータブル電動工具に最適です。
Portable power tools
- ・無停電電源、バックアップ電源に最適です。
UPS and back power supply



■ 性 能/PERFORMANCE SPECIFICATIONS

定格電圧	RATED VOLTAGE	3V
使用温度範囲	OPERATING TEMPERATURE RANGE	-40°C ~ +65°C (-40°C ~ +85°C:2.5V)
サージ電圧	SURGE VOLTAGE	3.2V
静電容量範囲	CAPACITANCE RANGE	100 ~ 470F
静電容量許容差 (25°C)	CAPACITANCE TOLERANCE (25°C)	-10 ~ +30%
温度特性 -40 ~ +65°C	TEMPERATURE CHARACTERISTICS -40 ~ +65°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温負荷特性 65°C, 定格電圧印加 1500時間	HIGH TEMPERATURE LOADED APPLICATION OF RATED VOLTAGE AT 65°C, 1500hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
高温保存特性 65°C 1000時間	HIGH TEMPERATURE STRAGE STRAGE AT 65°C, 1000hours.	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE
サイクル寿命 定格電圧⇔定格電圧/2 500,000サイクル/25°C	CYCLE LIFE RATED VOLTAGE ⇔ RATED VOLTAGE/2 500,000cycles/25°C	CAPACITANCE CHANGE : WITH IN 30% OF THE VALUE AT 25°C ESR : LESS THAN 2 TIMES OF THE INITIAL SPECIFIDE VALUE

■ 形 状/SHAPE



■ 定格・寸法/RATING AND DIMENSIONS

W.V.	Cap. 25°C (F)	Impedance		Leakage current (72hrs) (mA)	Size φ D × L (mm)	Weight (g)	P/N
		ESR _{DC} (mΩ)	ESR _{AC} 1kHz (mΩ)				
3V (3R0)	100	12	8	0.3	22 × 45	20	3R0DSE107QSD220045E
	200	10	6	0.7	30 × 50	36	3R0DSE207QSD300050E
	350	3.5	3	1.0	35 × 60	64	3R0DSE357QSL350060E
	400	3.2	2.8	1.0	35 × 60	70	3R0DSE407QSL350060E



TOSHIN KOGYO CO.,LTD.

[http : //www.toshinkk.co.jp/](http://www.toshinkk.co.jp/)

HEAD OFFICE

2F Tsukasa Bld. 2-15-4 Uchikanda Chiyoda-ku Tokyo
TEL : 81-33256-3781 FAX : 81-33256-7231