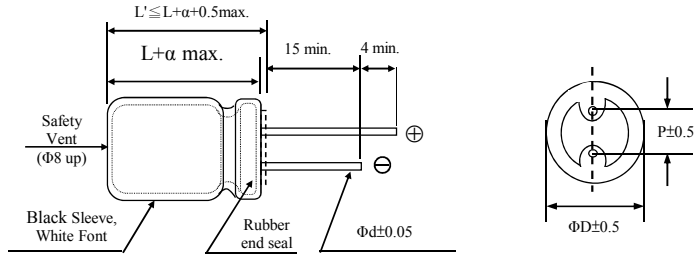


FOR APPROVAL

DIMENSIONS(mm)

ΦD	12.5	18	18
L	20	25	35
α	2.0	2.0	2.0
P	5.0	7.5	7.5
Φd	0.6	0.8	0.8



Customer: Ozdisan	Electrolytic Capacitors HE Series	Su'scon Code
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Electric Characteristics:												
Ozdisan P/N	Su'scon P/N	Cap. (uF)	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. (°C)	Nominal Case Size D*L(mm)	Leakage Current Max (uA)	D.F. MAX (%)	R.C		Load Life (hours)
										120Hz (mA rms)	100KHz (mA rms)	
	HE160M101X20TKKKS00A	100	±20	160	200	105	12.5*20	740	15	510	1147	10000
	HE200M331K35TKKKS00A	330	±20	200	250	105	18*35	2740	15	1430	3218	10000
	HE350M101K25TKKKS00A	100	±20	350	400	105	18*25	1500	20	700	1575	10000

REMARKS:

- Leakage Current Test:** 160V ~450V at 20°C for 1 minutes ;
- Operating temperature:** 160V~400V -40°C~ +105°C ;420V~ 450V -25°C~ +105°C ;
- Dissipation Factor Test:** at 20°C, 120 Hz.
- Capacitance Test:** at 20°C, 120 Hz.
- Ripple Current Test :** at 105°C, 120 Hz & 100K Hz;
- Load Life:** 10000 hours, subjected to DC voltage with the rated ripple current is applied at 105°C.
(ΦD ≧ 10:8000 hours)

Capacitance Change: Within ±20% of initial value;
tanδ: 200% or less of initial specified value;
 According to the specified value which stated in the catalogue to do the life testing;

Leakage Current: Initial specified value or less;

- Shelf Life:** The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours 105°C without voltage applide. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.

Capacitance Change : Within ±20% of initial value;
tanδ: 200% or less of initial specified value;
Leakage Current : Initial specified value or less.

- when have characteristic requested:** Load life & shelf life test and etc. , judgment standard reference to our catalogue.

●SPECIFICATION

Leakage Current 洩漏電流	$I \leq 0.04CV + 100(uA)$, After 1 minutes application of DC working voltage, at 20°C															
Dissipation Factor 散逸因素 (損失角) (tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C															
	<table border="1" style="width: 100%; text-align: center;"> <tr> <th>Rate Voltage(V)</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>420</th> <th>450</th> </tr> <tr> <th>tanδ (MAX)</th> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> </tr> </table>	Rate Voltage(V)	160	200	250	350	400	420	450	tanδ (MAX)	0.15	0.15	0.15	0.20	0.20	0.20
Rate Voltage(V)	160	200	250	350	400	420	450									
tanδ (MAX)	0.15	0.15	0.15	0.20	0.20	0.20	0.20									
Standards 參照標準	JIS C-5101-4(IEC 60384)															

●RIPPLE CURRENT COEFFICIENTS

Frequency coefficient of allowable ripple current						
Capacitance(uF)	Frequency(Hz)					
	50	120	1k	10k	100k	
1~5.6	0.65	1.00	1.25	1.50	2.00	
6.8~82	0.70	1.00	1.75	2.25	2.50	
100~330	0.75	1.00	1.67	2.05	2.25	

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise.

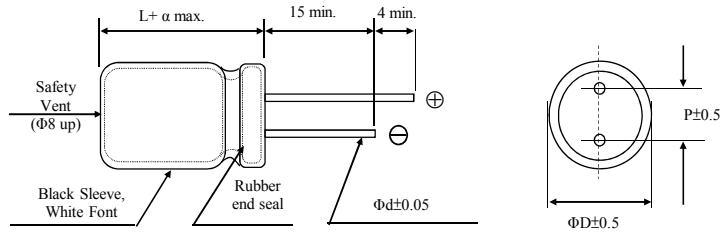
When long life performance is required in actual use, the rms ripple current has to be reduced.

Production date: 2023.04.17

FOR APPROVAL

DIMENSIONS(mm)

ΦD	12.5
L	25
α	1.2
P	5.0
Φd	0.6



Customer: Ozdisan	Electrolytic Capacitors HE Series	Su'scon Code
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Electric Characteristics:												
Ozdisan P/N	Su'scon P/N	Cap. (uF)	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. (°C)	Nominal Case Size D*L(mm)	Leakage Current Max (uA)	D.F. MAX (%)	R.C		Load Life (hours)
										120Hz (mA rms)	100KHz (mA rms)	
	HE200M101X25PE99S00A	100	±20	200	250	105	12.5*25	900	15	600	1350	10000

REMARKS:

- Leakage Current Test:** 160V ~450V at 20°C for 1 minutes ;
- Operating temperature:** 160V~400V -40°C ~ +105°C ;420V~ 450V -25°C ~ +105°C ;
- Dissipation Factor Test:** at 20°C, 120 Hz.
- Capacitance Test:** at 20°C, 120 Hz.
- Ripple Current Test :** at 105°C, 120 Hz & 100K Hz;
- Load Life:** 10000 hours, subjected to DC voltage with the rated ripple current is applied at 105°C.
(ΦD ≧ 10:8000 hours)

Capacitance Change: Within±20% of initial value;
tanδ: 200% or less of initial specified value;
 According to the specified value which stated in the catalogue to do the life testing;

Leakage Current: Initial specified value or less;

- Shelf Life:** The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours 105°C without voltage applide. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.

Capacitance Change : Within±20% of initial value;
tanδ: 200% or less of initial specified value;
Leakage Current : Initial specified value or less.

- when have characteristic requested:** Load life & shelf life test and etc. , judgment standard reference to our catalogue.

●SPECIFICATION											
Leakage Current 洩漏電流		I ≤ 0.04CV + 100(uA), After 1 minutes application of DC working voltage, at 20°C									
Dissipation Factor 散逸因素 (損失角) (tan δ)		Measurement Frequency: 120Hz. Temperature: 20°C									
		Rate Voltage(V)		160	200	250	350	400	420	450	
		tanδ (MAX)		0.15	0.15	0.15	0.20	0.20	0.20	0.20	
Standards 參照標準		JIS C-5101-4(IEC 60384)									

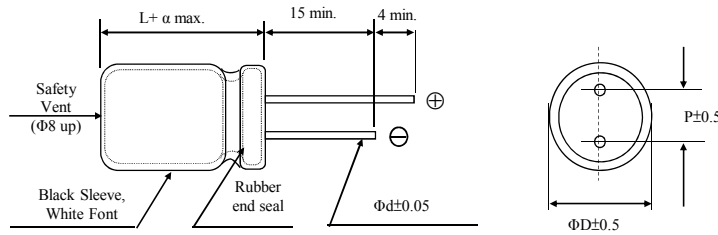
●RIPPLE CURRENT COEFFICIENTS						
Frequency coefficient of allowable ripple current						
Capacitance(uF)	Frequency(Hz)					
	50	120	1k	10k	100k	
1~5.6	0.65	1.00	1.25	1.50	2.00	
6.8~82	0.70	1.00	1.75	2.25	2.50	
100~330	0.75	1.00	1.67	2.05	2.25	

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise.
 When long life performance is required in actual use, the rms ripple current has to be reduced.
 Production date: 2023.04.17

FOR APPROVAL

DIMENSIONS(mm)

ΦD	18
L	20
α	1.5
P	7.5
Φd	0.8



Customer: Ozdisan	Electrolytic Capacitors HE Series	Su'scon Code
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Electric Characteristics:												
Ozdisan P/N	Su'scon P/N	Cap. (uF)	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. (°C)	Nominal Case Size D*L(mm)	Leakage Current Max (uA)	D.F. MAX (%)	R.C		Load Life (hours)
										120Hz (mA rms)	100KHz (mA rms)	
	HE420M680K20PE99S00A	68	±20	420	470	105	18*20	1242	20	510	1275	10000

REMARKS:

- Leakage Current Test:** 160V ~450V at 20°C for 1 minutes ;
- Operating temperature:** 420V -40°C ~ +105°C
- Dissipation Factor Test:** at 20°C, 120 Hz.
- Capacitance Test:** at 20°C, 120 Hz.
- Ripple Current Test :** at 105°C, 120 Hz & 100K Hz;
- Load Life:** 10000 hours, subjected to DC voltage with the rated ripple current is applied at 105°C.
(ΦD ≧ 10:8000 hours)

Capacitance Change: Within ±20% of initial value;
tanδ: 200% or less of initial specified value;
 According to the specified value which stated in the catalogue to do the life testing;

Leakage Current: Initial specified value or less;

- Shelf Life:** The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours 105°C without voltage applide. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.

Capacitance Change : Within ±20% of initial value;
tanδ: 200% or less of initial specified value;
Leakage Current : Initial specified value or less.

- when have characteristic requested:** Load life & shelf life test and etc. , judgment standard reference to our catalogue.

●SPECIFICATION

Leakage Current 洩漏電流	I ≤ 0.04CV + 100(uA), After 1 minutes application of DC working voltage, at 20°C															
Dissipation Factor 散逸因素 (損失角) (tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C															
	<table border="1" style="width: 100%; text-align: center;"> <tr> <th>Rate Voltage(V)</th> <td>160</td> <td>200</td> <td>250</td> <td>350</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <th>tanδ (MAX)</th> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> <td>0.20</td> </tr> </table>	Rate Voltage(V)	160	200	250	350	400	420	450	tanδ (MAX)	0.15	0.15	0.15	0.20	0.20	0.20
Rate Voltage(V)	160	200	250	350	400	420	450									
tanδ (MAX)	0.15	0.15	0.15	0.20	0.20	0.20	0.20									
Standards 參照標準	JIS C-5101-4(IEC 60384)															

●RIPPLE CURRENT COEFFICIENTS

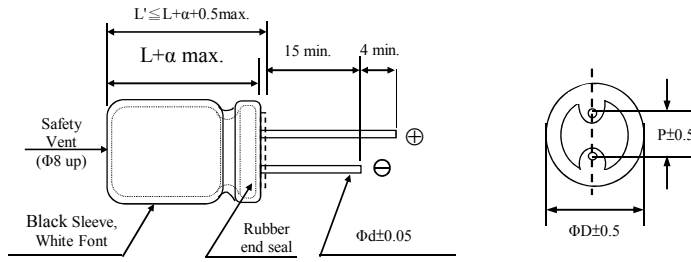
Frequency coefficient of allowable ripple current						
Capacitance(uF)	Frequency(Hz)					
	50	120	1k	10k	100k	
1~5.6	0.65	1.00	1.25	1.50	2.00	
6.8~82	0.70	1.00	1.75	2.25	2.50	
100~330	0.75	1.00	1.67	2.05	2.25	

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise.
 When long life performance is required in actual use, the rms ripple current has to be reduced.
 Production date: 2023.04.17

FOR APPROVAL

DIMENSIONS(mm)

ΦD	18
L	32
α	2.0
P	7.5
Φd	0.8



Customer: Ozdisan	Electrolytic Capacitors HE Series	Su'scon Code
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Electric Characteristics:												
Ozdisan P/N	Su'scon P/N	Cap. (uF)	Cap. Tol. (%)	Rate Volt. (V-DC)	Surge Volt. (V-DC)	Oper. Temp. (°C)	Nominal Case Size D*L(mm)	Leakage Current Max (uA)	D.F. MAX (%)	R.C		Load Life (hours)
										120Hz (mA rms)	100KHz (mA rms)	
	HE450M680K32TE99S00A	68	±20	450	500	105	18*32	662	20	630	1575	10000

REMARKS:

- Leakage Current Test:** 160V ~450V at 20°C for 1 minutes ;
- Operating temperature:** 450V -40°C ~ +105°C
- Dissipation Factor Test:** at 20°C, 120 Hz.
- Capacitance Test:** at 20°C, 120 Hz.
- Ripple Current Test :** at 105°C, 120 Hz & 100K Hz;
- Load Life:** 10000 hours, subjected to DC voltage with the rated ripple current is applied at 105°C.
(ΦD ≧ 10:8000 hours)

Capacitance Change: Within ±20% of initial value;
tanδ: 200% or less of initial specified value;
 According to the specified value which stated in the catalogue to do the life testing;

Leakage Current: Initial specified value or less;

- Shelf Life:** The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1000 hours 105°C without voltage applide. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.

Capacitance Change : Within ±20% of initial value;
tanδ: 200% or less of initial specified value;
Leakage Current : Initial specified value or less.

- when have characteristic requested:** Load life & shelf life test and etc. , judgment standard reference to our catalogue.

● **SPECIFICATION**

Leakage Current 洩漏電流	I ≤ 662(uA), After 1 minutes application of DC working voltage, at 20°C											
Dissipation Factor 散逸因素 (損失角) (tan δ)	Measurement Frequency: 120Hz. Temperature: 20°C											
	Rate Voltage(V)	160	200	250	350	400	420	450				
	tanδ (MAX)	0.15	0.15	0.15	0.20	0.20	0.20	0.20				
Standards 參照標準	JIS C-5101-4(IEC 60384)											

● **RIPPLE CURRENT COEFFICIENTS**

Frequency coefficient of allowable ripple current						
Capacitance(uF)	Frequency(Hz)					
	50	120	1k	10k	100k	
1~5.6	0.65	1.00	1.25	1.50	2.00	
6.8~82	0.70	1.00	1.75	2.25	2.50	
100~330	0.75	1.00	1.67	2.05	2.25	

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise.
 When long life performance is required in actual use, the rms ripple current has to be reduced.
 Production date: 2023.04.17