



REVISIONS

DOC. NO. SPC-F004 \* Effective: 7/8/02 \* DCP No: 1398

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1890	A	RELEASED	EO	3/12/06	TL	03/13/06	HO	03/13/06



Allowable ripple current vs. ambient temperature

Temperature(°C)	Under 50	70	85	105
Multiplier	1.95	1.8	1.4	1

Frequency coefficient of allowable ripple current

Freq.(Hz) Cap.(µF)	60	120	500	1K	10K Up
	Under 100	0.7	1	1.3	1.4
100 to 1000	0.75	1	1.2	1.3	1.35
1000 Up	0.8	1	1.1	1.12	1.15

Features:

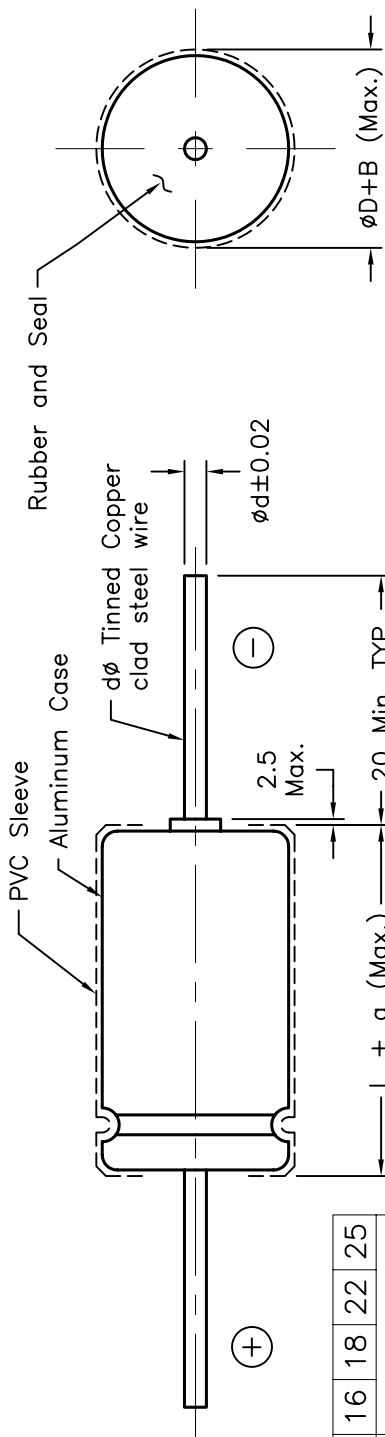
- Wide operating temperature range from -40°C ~ +105°C
- Excellent temperature performance
- Suitable to use for industrial equipment

ITEM	CHARACTERISTIC																																													
Operating Temperature Range	-40°C ~ +105°C																																													
Capacitance Tolerance	±20% @ 20°C 120Hz																																													
Leakage Current	<p><math>I = 0.02CV</math> or <math>3 (\mu A)</math> Whichever is greater (after 2 minutes applying the rated DC working voltage at 20°C)</p> <p>where: C = rated capacitance in uF V = rated DC working voltage in V.</p>																																													
Dissipation Factor (Tan δ) (© 20°C, 120 Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Tan δ</td> <td>0.23</td> <td>0.20</td> <td>0.17</td> <td>0.15</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> </tr> </tbody> </table> <p>For capacitors whose capacitance exceeds 1,000uF, the specification of tan δ is increased by 0.02 for every addition of 1,000uF.</p>	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	Tan δ	0.23	0.20	0.17	0.15	0.12	0.10	0.09	0.08																											
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Low Temperature Characteristics	<p>Impedance ratio at 120Hz.</p> <table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Z (-25°C) ∅D&lt;16</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z (+20°C) ∅D≥16</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z (-40°C) ∅D&lt;16</td> <td>10</td> <td>8</td> <td>6</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z (+20°C) ∅D≥16</td> <td>18</td> <td>16</td> <td>12</td> <td>10</td> <td>8</td> <td>8</td> <td>6</td> <td>6</td> </tr> </tbody> </table>	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	Z (-25°C) ∅D<16	6	4	3	3	2	2	2	2	Z (+20°C) ∅D≥16	8	6	4	4	3	3	3	3	Z (-40°C) ∅D<16	10	8	6	6	4	3	3	3	Z (+20°C) ∅D≥16	18	16	12	10	8	8	6	6
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Load Life	<p>After 1000 hours application of rated voltage at 105°C, capacitors meet the characteristics requirements listed at right.</p> <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±20% of initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Less than 200% of specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Initial specified value or less</td> </tr> </tbody> </table>	Capacitance Change	Within ±20% of initial value	Dissipation Factor	Less than 200% of specified value	Leakage Current	Initial specified value or less																																							
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Shelf Life	After leaving capacitors under no load at 105°C for 1,000 hours and applying voltage they meet the specified value for load life characteristics listed above.																																													
Marking	Printed with white color letter on black sleeve.																																													
Applicable Standards	Satisfies characteristic W of JIS C5141.																																													

SPC-F004.DWG

TOLERANCES: UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.	DRAWN BY:	DATE:	DRAWING TITLE:			
	EKLAS ODISH	3/13/06	Axial Aluminum Electrolytic Capacitors, High Temp.			
	CHECKED BY:	DATE:	SIZE	DWG. NO.	ELECTRONIC FILE	REV
	THOMAS LEE	03/13/06	A	TA-689	TA-689.DWG	A
	APPROVED BY:	DATE:	SCALE: NTS		U.O.M.: Millimeters	SHEET: 1 OF 2
HISHAM ODISH	03/13/06					

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$\phi D$	5	6	6.3	8	10	13	16	18	22	25
$\phi d$	0.8									
a	1.5									
B	0.5									
	2									
	1									

Multicomp Mfr P/N	Capacitance ( $\mu F$ )	Working Voltage (VDC)	Diameter (mm)	Length (mm)
MCHT470M1AB-0513-RH	47	10	5	13
MCHT101M1AB-0613-RH	100	10	6	13
MCHT471M1AB-0816-RH	470	10	8	16
MCHT102M1AB-1017-RH	1000	10	10	17
MCHT470M1CB-0613-RH	47	16	6	13
MCHT101M1CB-6.314-RH	100	16	6.3	14
MCHT471M1CB-0816-RH	470	16	8	16
MCHT102M1CB-1021-RH	1000	16	10	21
MCHT222M1CB-1324-RH	2200	16	13	24
MCHT472M1CB-1633-RH	4700	16	16	33
MCHT100M1EB-0513-RH	10	25	5	13
MCHT220M1EB-0513-RH	22	25	5	13
MCHT470M1EB-0613-RH	47	25	6	13
MCHT101M1EB-0813-RH	100	25	8	13
MCHT221M1EB-0816-RH	220	25	8	16
MCHT471M1EB-1021-RH	470	25	10	21
MCHT102M1EB-1322-RH	1000	25	13	22
MCHT222M1EB-1628-RH	2200	25	16	28
MCHT472M1EB-1836-RH	4700	25	18	36
MCHT100M1VB-0513-RH	10	35	5	13
MCHT220M1VB-0613-RH	22	35	6	13
MCHT101M1VB-0816-RH	100	35	8	16
MCHT221M1VB-1017-RH	220	35	10	17
MCHT471M1VB-1322-RH	470	35	13	22
MCHT102M1VB-1327-RH	1000	35	13	27
MCHT222M1VB-1636-RH	2200	35	16	36
MCHT472M1VB-2242-RH	4700	35	22	42
MCHT4R7M1HB-0513-RH	4.7	50	5	13
MCHT010M1HB-0513-RH	1	50	5	13
MCHT2R2M1HB-0513-RH	2.2	50	5	13
MCHT100M1HB-0613-RH	10	50	6	13
MCHT220M1HB-0613-RH	22	50	6	13
MCHT470M1HB-0813-RH	47	50	8	13
MCHT101M1HB-1017-RH	100	50	10	17
MCHT221M1HB-1021-RH	220	50	10	21
MCHT331M1HB-1322-RH	330	50	13	22
MCHT471M1HB-1322-RH	470	50	13	22
MCHT102M1HB-1633-RH	1000	50	16	33
MCHT100M1JB-0613-RH	10	63	6	13
MCHT220M1JB-6.314-RH	22	63	6.3	14
MCHT470M1JB-0816-RH	47	63	8	16
MCHT101M1JB-1017-RH	100	63	10	17
MCHT221M1JB-1322-RH	220	63	13	22
MCHT471M1JB-1327-RH	470	63	13	27
MCHT102M1JB-1633-RH	1000	63	16	33
MCHT222M1JB-2042-RH	2200	63	20	42
MCHT100M2AB-6.314-RH	10	100	6.3	14
MCHT220M2AB-0816-RH	22	100	8	16
MCHT470M2AB-1021-RH	47	100	10	21
MCHT101M2AB-1322-RH	100	100	13	22

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SIZE DWG. NO.

A

TA-689

ELECTRONIC FILE

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SCALE: NTS

U.O.M.: Millimeters

SHEET: 2 OF 2

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