



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

Cap.(µF) \ Freq.(Hz)	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:

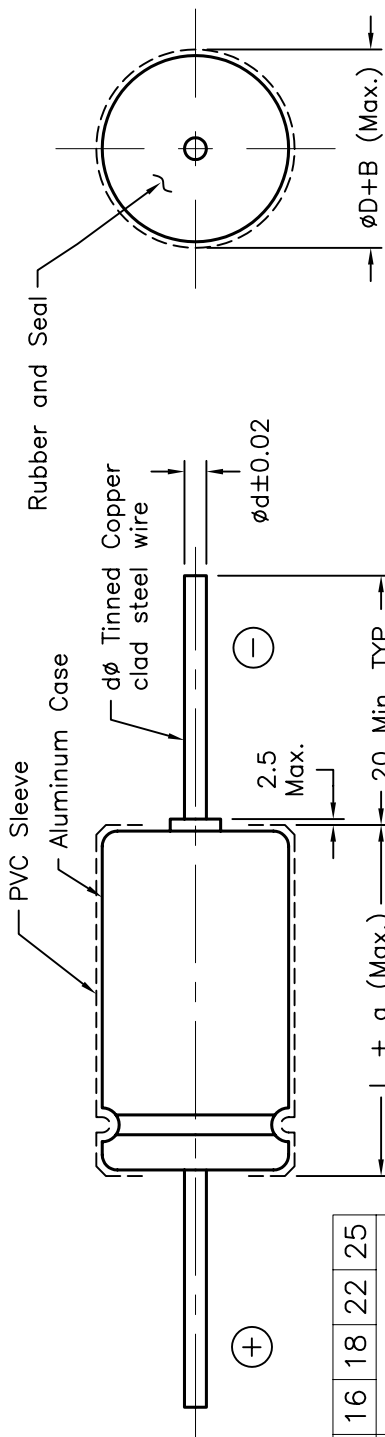
- Wide operating temperature range from -40°C ~ +105°C
- Excellent temperature performance
- Suitable to use for industrial equipment

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																											
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																																						
Surge Voltage	<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>Surge Voltage (V)</td> <td>7.3</td> <td>13</td> <td>20</td> <td>32</td> <td>44</td> <td>63</td> <td>79</td> <td>125</td> </tr> </tbody> </table>	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	Surge Voltage (V)	7.3	13	20	32	44	63	79	125																											
Rated Voltage (V)	6.3	10	16	25	35	50	63	100																																						
Surge Voltage (V)	7.3	13	20	32	44	63	79	125																																						
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
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																																						
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																																							
Capacitance Change	Within ±20% of initial value																																													
Dissipation Factor	Less than 200% of specified value																																													
Leakage Current	Initial specified value or less																																													
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					

ALL RIGHTS RESERVED. NO PORTION OF THIS PUBLICATION, WHETHER IN WHOLE OR IN PART CAN BE REPRODUCED WITHOUT THE EXPRESS WRITTEN CONSENT OF SPC TECHNOLOGY. DISCLAIMER: ALL STATEMENTS AND TECHNICAL INFORMATION CONTAINED HEREIN ARE BASED UPON INFORMATION AND/OR TESTS WE BELIEVE TO BE ACCURATE AND RELIABLE. SINCE CONDITIONS OF USE ARE BEYOND OUR CONTROL, THE USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR THE INTENDED USE AND ASSUME ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THEREWITH.



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

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

ALL RIGHTS RESERVED. NO PORTION OF THIS PUBLICATION, WHETHER IN WHOLE OR IN PART CAN BE REPRODUCED WITHOUT THE EXPRESS WRITTEN CONSENT OF SPC TECHNOLOGY.

SPC-F004.DWG

SIZE DWG. NO.

A

TA-689

ELECTRONIC FILE

TA-689.DWG

REV

A

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

SCALE: NTS

U.O.M.: Millimeters

SHEET: 2 OF 2