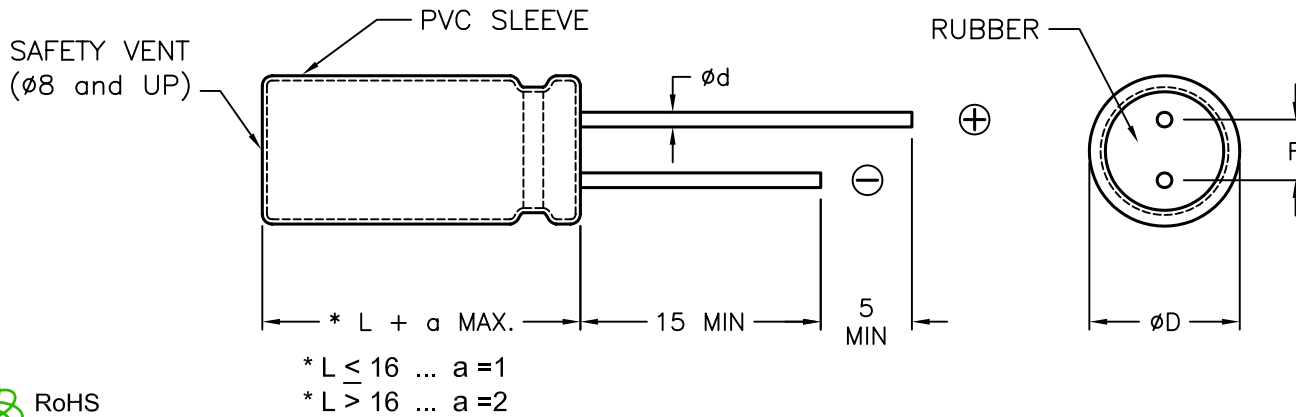


DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
1881	A	RELEASED	EO	01/23/06	HO	1/23/06	JWM	01/23/06

FEATURES:

1. WIDE CV VALUE RANGE FOR GENERAL PURPOSE.
2. SAFETY VENT CONSTRUCTION.
3. 2000 HOURS AT 105°.



Multicomp Mfr P/N#	Capacitance (µF)	Working Voltage (WVDC)	Max. Ripple Current mA (rms) @ 105°C, 120Hz	Case Size (mm)		F±0.5	ød ±0.02
				øD Max.	L		
MCRH10V226M5X11-RH	22	10	49	5	11	2	0.5
MCRH10V476M5X11-RH	47	10	70	5	11	2	0.5
MCRH10V107M5X11-RH	100	10	105	5	11	2	0.5
MCRH10V227M6.3X11-RH	220	10	175	6.3	11	2.5	0.5
MCRH10V337M8X11-RH	330	10	245	8	12	3.5	0.6
MCRH10V477M8x11-RH	470	10	290	8	12	3.5	0.6
MCRH10V108M10X16-RH	1000	10	550	10	16	5	0.6
MCRH10V228M13X21-RH	2200	10	860	13	21	5	0.6
MCRH10V338M13X21-RH	3300	10	1100	16	21	7.5	0.8
MCRH10V478M16X26-RH	4700	10	1400	16	26	7.5	0.8
MCRH16V106M5X11-RH	10	16	35	5	11	2	0.5
MCRH16V226M5X11-RH	22	16	54	5	11	2	0.5
MCRH16V336M5X11-RH	33	16	64	5	11	2	0.5
MCRH16V476M5X11-RH	47	16	99	5	11	2	0.5
MCRH16V107M6.3X11-RH	100	16	125	6.3	11	2.5	0.5
MCRH16V227M8X11-RH	220	16	215	8	11	3.5	0.6
MCRH16V337M8X11-RH	330	16	260	8	11	3.5	0.6
MCRH16V477M10X13-RH	470	16	370	10	13	5	0.6
MCRH16V108M10X21-RH	1000	16	640	16	21	7.5	0.8
MCRH16V228M13X21-RH	2200	16	1000	13	21	5	0.6
MCRH16V338M13X26-RH	3300	16	1300	13	26	5	0.6
MCRH16V478M16X32-RH	4700	16	1600	16	32	7.5	0.8

SPC-F004.DWG

TOLERANCES: UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.	DRAWN BY:	DATE:	DRAWING TITLE:			
	EKLAS ODISH	01/23/06	General-Purpose Capacitor, Radial Lead, Aluminum, Electrolytic, 105°C			
	CHECKED BY:	DATE:	SIZE	DWG. NO.	ELECTRONIC FILE	REV
	HISHAM ODISH	1/23/06	A	TA-686	TA-686.DWG	A
	APPROVED BY:	DATE:	SCALE: NTS		U.O.M.: Millimeters	SHEET: 1 OF 3
JEFF MCVICKER	01/23/06					

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Multicomp Mfr P/N#	Capacitance (μ F)	Working Voltage (WVDC)	Max. Ripple Current mA (rms) @ 105°C, 120Hz	Case Size (mm)		F \pm 0.5	ϕ d \pm 0.02
				ϕ D Max.	L		
MCRH25V336M5X11-RH	33	25	69	5	11	2	0.5
MCRH25V476M5X11-RH	47	25	82	5	11	2	0.5
MCRH25V107M6.3X11-RH	100	25	135	6.3	11	2.5	0.5
MCRH25V227M8X11-RH	220	25	230	8	11	3.5	0.6
MCRH25V337M10X13-RH	330	25	335	10	13	5	0.6
MCRH25V477M10X16-RH	470	25	440	10	16	5	0.6
MCRH25V108M13X21-RH	1000	25	770	13	21	5	0.6
MCRH25V228M13X26-RH	2200	25	1170	13	26	5	0.6
MCRH25V338M16X32-RH	3300	25	1460	16	32	7.5	0.8
MCRH35V475M5X11-RH	4.7	35	28	5	11	2	0.5
MCRH35V106M5X11-RH	10	35	41	5	11	2	0.5
MCRH35V226M5X11-RH	22	35	61	5	11	2	0.5
MCRH35V336M5X11-RH	33	35	75	5	11	2	0.5
MCRH35V476M6.3X11-RH	47	35	100	6.3	11	2.5	0.5
MCRH35V107M8X11-RH	100	35	170	8	11	3.5	0.6
MCRH35V227M10X13-RH	220	35	300	10	13	5	0.6
MCRH35V337M10X16-RH	330	35	400	10	16	5	0.6
MCRH35V477M10X21-RH	470	35	520	10	21	5	0.6
MCRH35V108M13X21-RH	1000	35	920	13	21	5	0.6
MCRH35V228M16X32-RH	2200	35	1340	16	32	7.5	0.8
MCRH50V474M5X11-RH	0.47	50	8	5	11	2	0.5
MCRH50V105M5X11-RH	1	50	12	5	11	2	0.5
MCRH50V225M5X11-RH	2.2	50	17	5	11	2	0.5
MCRH50V475M5X11-RH	4.7	50	30	5	11	2	0.5
MCRH50V106M5X11-RH	10	50	46	5	11	2	0.5
MCRH50V226M5X11-RH	22	50	68	5	11	2	0.5
MCRH50V476M6.3X11-RH	47	50	110	6.3	11	2.5	0.5
MCRH50V107M8X11-RH	100	50	180	8	11	3.5	0.6
MCRH50V227M10X16-RH	220	50	345	10	16	5	0.6
MCRH50V477M13X21-RH	470	50	610	13	21	5	0.6
MCRH50V108M16X26-RH	1000	50	1080	16	26	7.5	0.8
MCRH63V105M5X11-RH	1	63	15	5	11	2	0.5
MCRH63V225M5X11-RH	2.2	63	23	5	11	2	0.5
MCRH63V335M5X11-RH	3.3	63	29	5	11	2	0.5
MCRH63V475M5X11-RH	4.7	63	32	5	11	2	0.5
MCRH63V226M6.3X11-RH	22	63	82	6.3	11	2.5	0.5
MCRH63V336M6.3X11-RH	33	63	100	6.3	11	2.5	0.5
MCRH63V476M8X11-RH	47	63	135	8	11	3.5	0.6
MCRH63V227M10X21-RH	220	63	400	10	21	5	0.6
MCRH63V337M13X21-RH	330	63	540	13	21	5	0.6
MCRH63V477M13X26-RH	470	63	700	13	26	5	0.6
MCRH63V108M16X32-RH	1000	63	1210	16	32	7.5	0.8
MCRH100V105M5X11-RH	1	100	15	5	11	2	0.5
MCRH100V225M5X11-RH	2.2	100	23	5	11	2	0.5
MCRH100V335M5X11-RH	3.3	100	29	5	11	2	0.5
MCRH100V475M5X11-RH	4.7	100	34	5	11	2	0.5
MCRH100V106M6.3X11-RH	10	100	56	6.3	11	2.5	0.5
MCRH100V226M8x11-RH	22	100	96	8	12	3.5	0.6
MCRH100V336M10X13-RH	33	100	140	10	13	5	0.6
MCRH100V476M10X16-RH	47	100	180	10	16	5	0.6
MCRH100V107M13x21-RH	100	100	320	13	21	5	0.6
MCRH100V227M16X26-RH	220	100	570	16	26	7.5	0.8
MCRH100V337M16X26-RH	330	100	330	16	26	7.5	0.8

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SPC-F004.DWG

SIZE DWG. NO.

A

TA-686

ELECTRONIC FILE

TA-686.DWG

REV

A

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

SCALE: NTS

U.O.M.: Millimeters

SHEET: 2 OF 3

CHARACTERISTICS

ITEM	PERFORMANCE																																																																					
Operating Temperature Range	-40°C to 105°C	-25°C to 105°C																																																																				
Rated Working Voltage Range	6.3 - 100 VDC	160 - 450 VDC																																																																				
Nominal Capacitance Range	0.1 - 15000 μ F	0.47 - 330 μ F																																																																				
Capacitance Tolerance	$\pm 20\%$ (at +20°C, 120 Hz)																																																																					
Leakage Current	$I \leq 0.01CV$ or $3\mu A$ max	$I \leq 0.03CV + 20\mu A$ Max.																																																																				
	whichever is greater after 3 minutes. where: I = Leakage Current in μA C = Rated capacitance in μF V = Working voltage in V																																																																					
Dissipation Factor (Tan δ) (120 Hz \ +20°C)	<table border="1"> <thead> <tr> <th>Working Voltage</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> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Tan δ Max.</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.07</td> <td>0.15</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> <td>0.24</td> <td>0.24</td> </tr> </tbody> </table>														Working Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450	Tan δ Max.	0.22	0.19	0.16	0.14	0.12	0.10	0.10	0.07	0.15	0.15	0.15	0.20	0.24	0.24																										
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For capacitors whose capacitance exceeds 1,000 μF , the specification of Tan δ is increased by 0.02 for every addition of 1,000 μF .																																																																						
Maximum Permissible Ripple Current	Refer to standard products table (120 Hz, +105°). Correction factor for frequency.																																																																					
	<table border="1"> <thead> <tr> <th rowspan="2">W.V. (VDC)</th> <th colspan="6">Freq. (Hz)</th> </tr> <tr> <th>60</th> <th>120</th> <th>1K</th> <th>10K</th> <th>100K</th> </tr> </thead> <tbody> <tr> <td rowspan="3">6.3-50</td> <td>0.1 - 330</td> <td>0.85</td> <td>1</td> <td>1.30</td> <td>1.40</td> <td>1.55</td> </tr> <tr> <td>470 - 3300</td> <td>0.95</td> <td>1</td> <td>1.15</td> <td>1.20</td> <td>1.25</td> </tr> <tr> <td>≥ 4700</td> <td>0.95</td> <td>1</td> <td>1.10</td> <td>1.20</td> <td>1.20</td> </tr> <tr> <td rowspan="3">63-100</td> <td>0.47 - 33</td> <td>0.75</td> <td>1</td> <td>1.55</td> <td>1.65</td> <td>1.80</td> </tr> <tr> <td>47 - 220</td> <td>0.75</td> <td>1</td> <td>1.40</td> <td>1.60</td> <td>1.65</td> </tr> <tr> <td>≥ 330</td> <td>0.80</td> <td>1</td> <td>1.30</td> <td>1.35</td> <td>1.40</td> </tr> <tr> <td>≥ 160</td> <td>1 - 220</td> <td>0.70</td> <td>1</td> <td>1.30</td> <td>1.70</td> <td>1.70</td> </tr> </tbody> </table>														W.V. (VDC)	Freq. (Hz)						60	120	1K	10K	100K	6.3-50	0.1 - 330	0.85	1	1.30	1.40	1.55	470 - 3300	0.95	1	1.15	1.20	1.25	≥ 4700	0.95	1	1.10	1.20	1.20	63-100	0.47 - 33	0.75	1	1.55	1.65	1.80	47 - 220	0.75	1	1.40	1.60	1.65	≥ 330	0.80	1	1.30	1.35	1.40	≥ 160	1 - 220	0.70	1	1.30	1.70
W.V. (VDC)	Freq. (Hz)																																																																					
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	≥ 330	0.80	1	1.30	1.35	1.40																																																																
≥ 160	1 - 220	0.70	1	1.30	1.70	1.70																																																																
Low Temperature Characteristics (stability at 120 Hz)	For capacitance value > 1000 μF : Add 0.5 per 1000 μF for -25°C/+25°C. Add 1.0 per 1000 μF for -40°C/+20°C.																																																																					
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Working Voltage	6.3	10	16	25	35	50	63	100	160	200	250	350	400	450																																																								
-25°C/+20°C	4	3	2	2	2	2	2	2	3	3	3	6	6	15																																																								
-40°C/+20°C	8	6	4	3	3	3	3	3																																																														
High Temperature Loading	After 2000 hrs application of DC rated working voltage at +105°C, the capacitor shall meet the following limits: Post test requirements at +20°C.																																																																					
	<table border="1"> <tbody> <tr> <td>Leakage Current</td> <td colspan="13">\leq the initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td colspan="13">$\leq \pm 20\%$ of initial specified value</td> </tr> <tr> <td>Dissipation Factor (Tan δ)</td> <td colspan="13">$\leq 200\%$ of initial specified value</td> </tr> </tbody> </table>														Leakage Current	\leq the initial specified value													Capacitance change	$\leq \pm 20\%$ of initial specified value													Dissipation Factor (Tan δ)	$\leq 200\%$ of initial specified value																										
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Dissipation Factor (Tan δ)	$\leq 200\%$ of initial specified value																																																																					
Shelf Life	After storage for 500 hours at 105°C with no voltage applied. Post test requirements at +20°C same limits for high temperature loading.																																																																					

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SPC-F004.DWG

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SHEET: 3 OF 3