

## K2M TYPE -40°C +105°C 5000H

Preliminary version

- High voltage and high ripple current design
- Strong miniaturization
- Surge-proof capacitor in full insulated box (UL approved)
- Mechanical design optimized for low profile modular machines
- Low capacitance value versus ground
- Low inductance design
- Central point of voltage available for circuital connections

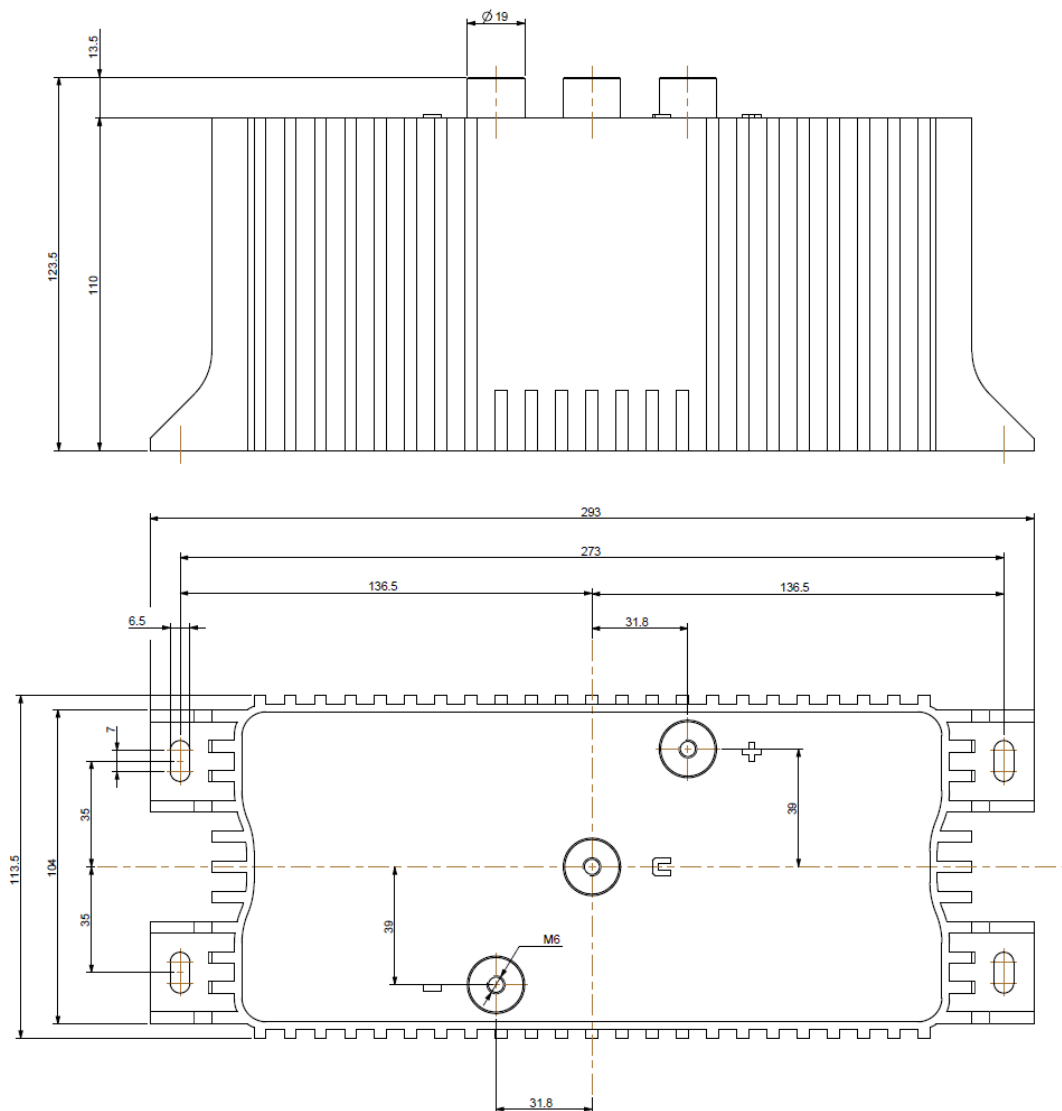


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## APPLICATIONS

Designed for professional application.

Switch mode power suppliers, high ripple current converters, motor drives.



# SPECIFICATIONS

**Preliminary version**

<b>Temperature Range</b>	Operating: -40°C +105°C Storage: Preferably below +25°C, not exceeding +40°C	[Environmental classification 40/ 105 /56 IEC-68]																																
<b>Rated Voltage Range (V<sub>r</sub>)</b>	from 500V to 1000V DC																																	
<b>Surge Voltage (V<sub>p</sub>)</b>	V <sub>p</sub> = 1.10 V <sub>r</sub>																																	
<b>Rated Capacitance Range</b>	from 3300 µF to 14000 µF																																	
<b>Capacitance Tolerance</b>	±20% at 100 Hz, 20°C [M class IEC-62] on request: -10% +30% at 100 Hz, 20°C [Q class IEC-62]																																	
<b>Leakage Current (I<sub>L</sub>) (5 min, 20°C)</b>	max I <sub>L</sub> = 0.006 C <sub>r</sub> V <sub>r</sub> + 4 µA																																	
<b>Ripple current (I<sub>r</sub>)</b>	<p>Refer to table at 105°C and 100Hz :</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">FREQUENCY</th> <th>50Hz</th> <th>100Hz</th> <th>500 Hz</th> <th>1000Hz</th> <th>&gt;10kHz</th> </tr> </thead> <tbody> <tr> <td>MULTIPLIER</td> <td>0.8</td> <td>1.0</td> <td>1.2</td> <td>1.3</td> <td>1.5</td> </tr> </tbody> </table> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">AMBIENT TEMP</th> <th>35°C</th> <th>40°C</th> <th>55°C</th> <th>65°C</th> <th>75°C</th> <th>85°C</th> <th>95°C</th> <th>105°C</th> <th>110°C</th> </tr> </thead> <tbody> <tr> <td>MULTIPLIER</td> <td>3.0</td> <td>2.8</td> <td>2.6</td> <td>2.4</td> <td>2.2</td> <td>1.8</td> <td>1.5</td> <td>1.0</td> <td>0.5</td> </tr> </tbody> </table> <p>Maximum internal temperature 110°C</p> <p>Maximum current 250A RSM</p>		FREQUENCY	50Hz	100Hz	500 Hz	1000Hz	>10kHz	MULTIPLIER	0.8	1.0	1.2	1.3	1.5	AMBIENT TEMP	35°C	40°C	55°C	65°C	75°C	85°C	95°C	105°C	110°C	MULTIPLIER	3.0	2.8	2.6	2.4	2.2	1.8	1.5	1.0	0.5
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<b>Insulation Resistance</b>	At 100V DC for 1 min is >100 MΩ across insulating frame and terminals																																	
<b>Vibration Resistance</b>	Frequency range: 10 Hz to 55 Hz, amplitude 0.75 mm max acceleration 5G for 3x0.5 h																																	
<b>Life test</b>	After 2,000 hours application of rated voltage at 85°C capacitors meet characteristics aside	Cap change ≤ 10% Tan δ ≤ 130% Leakage current (I <sub>L</sub> ) < initial limit Impedance (Z) ≤ 130%																																
<b>Shelf life</b>	After leaving capacitors under no load for 2000 hours at 85°C, when restored at 20°C meet specifications aside	Cap change ≤ ±15% Tan δ ≤ 150% Leakage current (I <sub>L</sub> ) < initial limit																																
<b>Useful life</b>	> 5000 h at 105°C																																	
<b>Failure rate</b>	≤ 150 fit (200 10 <sup>-9</sup> /h)																																	
<b>Self inductance</b>	Approx. 10 nH																																	
<b>Reference standards</b>	CECC 30.300 IEC 60384-4 LONG LIFE GRADE																																	

## K2M TYPE STANDARD RATINGS

*Preliminary version*

Cap $\mu\text{F}$	NOMINA L VOLTAGE VDC	RATED VOLTAGE E VDC	Tan $\delta$ MAX 100Hz 20°C	ESR TYP $\text{m}\Omega$ 100Hz 20°C	Z TYP $\text{m}\Omega$ 10KHz 20°C	Ir a.c. A max 100Hz 105°C *	Ir a.c. A max 100Hz 105°C **	Ir a.c. A max 10KHz 35°C **	PART NUMBER
3300	1000	880	<b>PLEASE TO CONTACT OUR TECHNICAL SERVICE FOR MORE INFORMATION</b>						K2M10133206M00ABC
5600	900	800							K2M90056206M00ABC
6000	840	740							K2M84060206M00ABC
6800	800	700							K2M80068206M00ABC
8800	700	610							K2M70088206M00ABC
14000	500	450							K2M50014306M00ABC

\* Natural air flow, Rated Voltage

\*\* Forced air flow, Rated Voltage

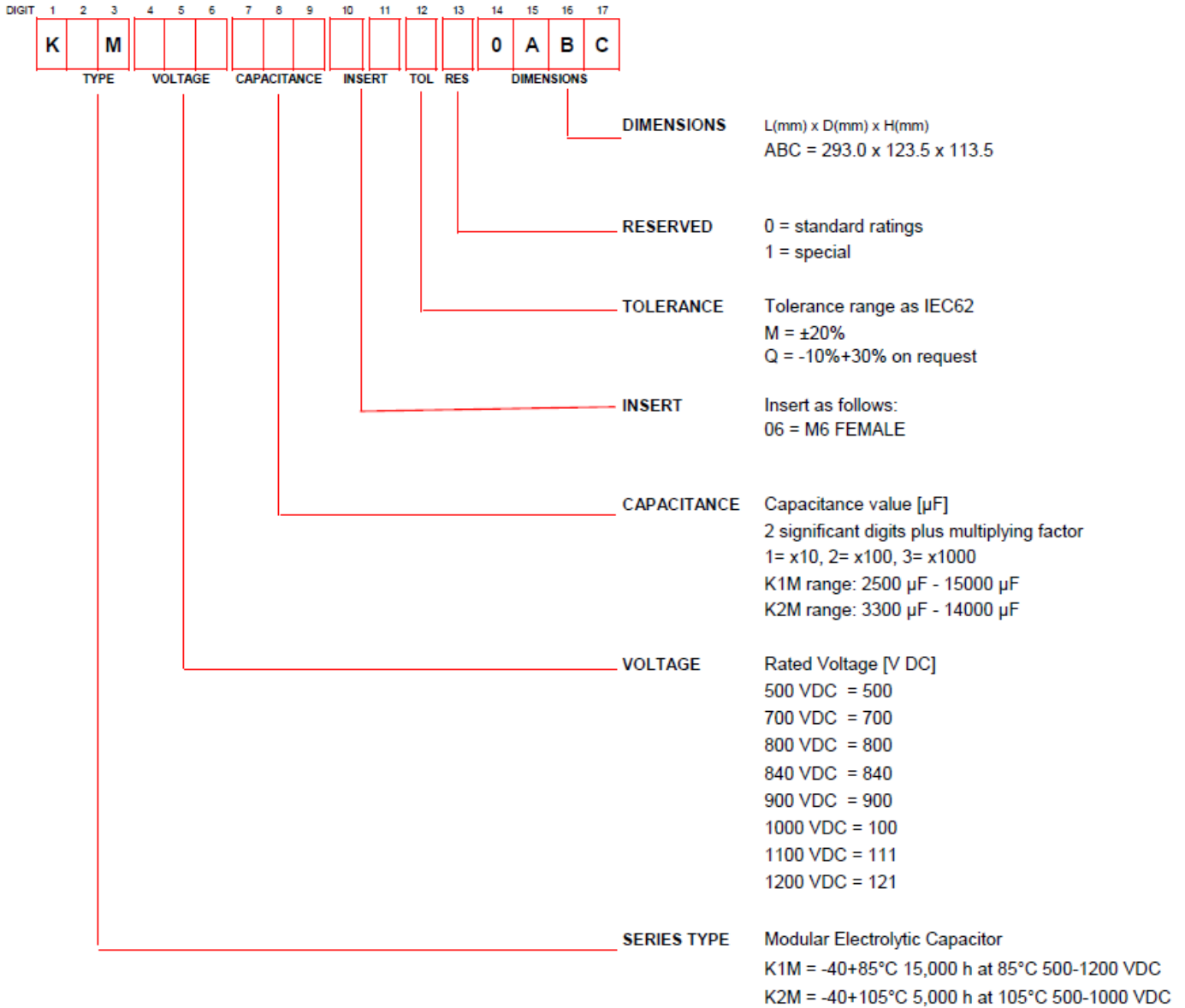
Remarks: ABC = 293.0 x 123.5 x 113.5 - L(mm) x D(mm) x H(mm)

# PART NUMBER SYSTEM

Preliminary version

Total length is 17 digits

## MODULAR ELECTROLYTIC CAPACITOR



### Examples

K	1	M	7	0	0	1	0	3	0	6	M	0	0	A	B	C	K1M 700V 10000µF, insert M6, -20%+20%, size 293 x 123.5 x 113.5
K	2	M	8	0	0	6	8	2	0	6	Q	0	0	A	B	C	K2M 800V 6800µF, insert M6, -10%+30%, size 293 x 123.5 x 113.5