

FEATURES	
<ul style="list-style-type: none"> <li>- Extremely Low Equivalent Series Resistance (ESR)</li> <li>- Conductive polymer multianode</li> <li>- Reduce ignition failure mode</li> <li>- 3x reflow 260°C compatible</li> <li>- Meets or Exceeds EIA 535 BAAC and IECQ standards (QC300801/US001, IS-28)</li> <li>- Pre-conditioned, surge current tested for maximum robustness</li> <li>- Capacitance range: 10µF to 100µF</li> </ul>	<ul style="list-style-type: none"> <li>- Operating Temperature range -55°C to +125°C</li> <li>- Precision molded case with flat surfaces for vacuum pick-up</li> <li>- Laser marking and bold videcon - readable polarity</li> <li>- Compliant terminations</li> <li>- Glue pad on underside for bonding to circuit board prior to soldering</li> <li>- Encapsulant material satisfies the UL 94 V0 flammability classification</li> <li>- MSL (moisture sensitivity level) per IPC/Jedec J-STD-020B is level 3</li> </ul>

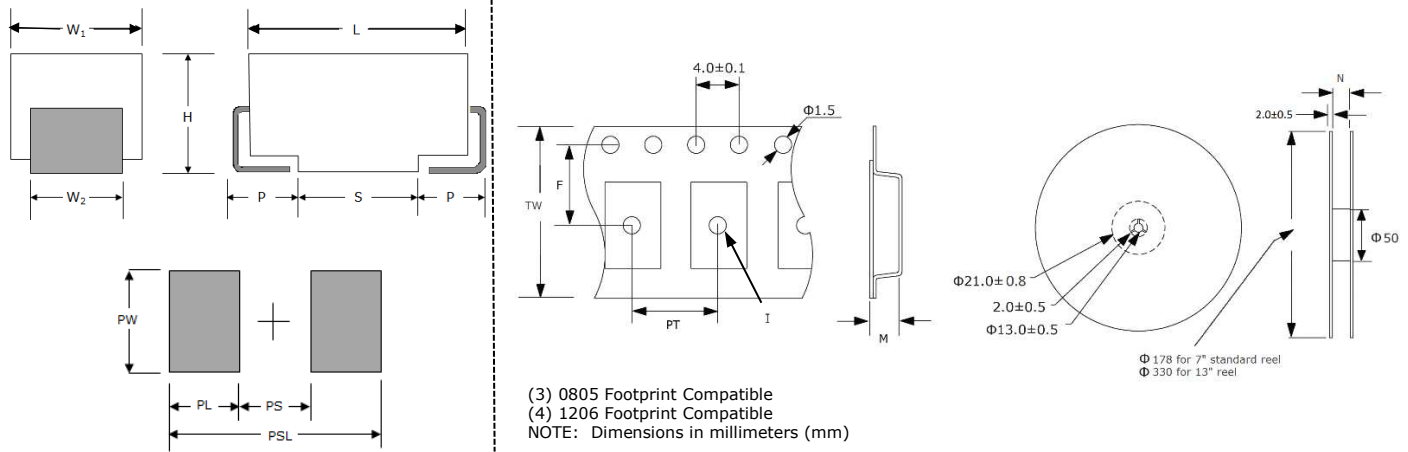


PART NUMBERING GUIDE	
<p>SERIES TYPE → MPT 10 / 35 H M 10 (optional) ← OPTIONAL</p> <p>CAPACITANCE in microfarads (µF) Ex. 0.68µF would be .68</p> <p>VOLTAGE 4 6(6.3) 10 35 100</p>	<p>OPTIONAL -13 = 13 inch diameter Tape &amp; Reel &lt;blank&gt; = 7 inch standard Tape &amp; Reel</p> <p>MAXIMUM ESR in milliohms</p> <p>TOLERANCE M = (±20%)</p> <p>CASE SIZE H (7343-43) Z (7361-38)</p>

ELECTRICAL SPECIFICATION											
Technical Data:	All technical data relate to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5 RMS with DC bias of 2.2Volts. DCL is measured at rated voltage after 5 minutes										
Capacitance Range	10µF to 1000µF										
Capacitance Tolerance	±20% (M)										
Rated Voltage DC (V <sub>R</sub> ) ≤+85°C	<table border="1"> <tr> <td>4</td> <td>6.3</td> <td>10</td> <td>35</td> <td>100</td> </tr> </table>	4	6.3	10	35	100					
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Category Voltage DC (V <sub>C</sub> ) ≤+125°C	<table border="1"> <tr> <td>3.2</td> <td>5</td> <td>8</td> <td>28</td> <td>80</td> </tr> </table>	3.2	5	8	28	80					
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Testing Data	<table border="1"> <tr> <td colspan="2">Surge Voltage</td> <td colspan="3">Storage Life</td> </tr> <tr> <td colspan="2">105°C Series ( -55°C to 105°C)</td> <td colspan="2">1.3 x Category Voltage</td> <td>105°C, 0V, 2000h</td> </tr> </table>	Surge Voltage		Storage Life			105°C Series ( -55°C to 105°C)		1.3 x Category Voltage		105°C, 0V, 2000h
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ESR Variation	ESR allowed to move up to 1.25 times limit post mounting										
Reliability	1% per 1000 hours at rated voltage (V <sub>R</sub> ), rated temperature (85°C) and 0.1Ω/volt circuit impedance, 60% confidence level										
Qualifications	Fixed Tantalum Specifications: EIA 525BAAC and IECQ standards (QC300801/US001, IS-28) Solder-ability: Sn Plated Terminations - meets requirements of IEC 68 2.20 test Ta and MIL-STD=202, Method 208 MSL (moisture sensitivity level): Level 3 of IPC/Jedec J-STD-020B										

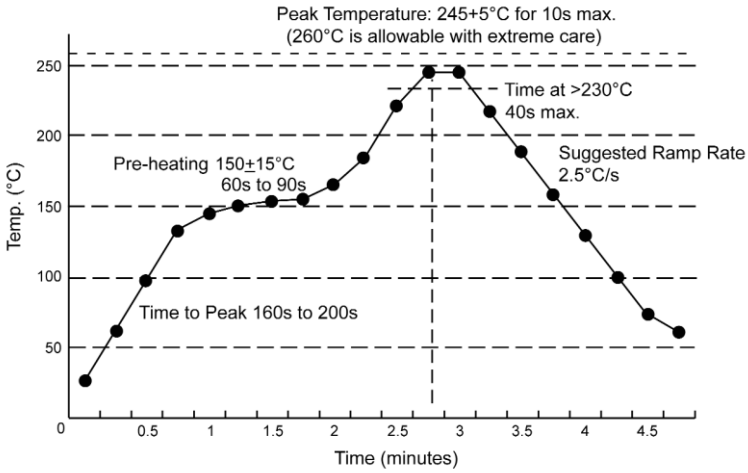
CASE SIZE CROSS REFERENCE: CAPACITANCE AND VOLTAGE RATING (Rated Voltage DC@ 85°C)						
Cap (µF)	4V	6.3V	10V	35V	100V	
10.0						Z
22.0				E		
330.0			E			
470.0						
680.0		E				
1000.0	E					

**OUTLINE DRAWING AND PAD PRINT** **TAPE AND REEL DIMENSION**



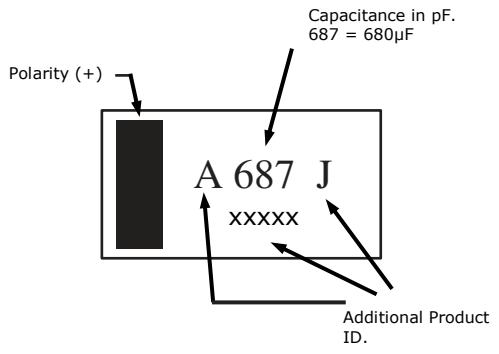
NEMCO Size	EIA Size	L ±0.2	W1 ±0.2	H (MAX)	W2 ±0.1	P ±0.3	S Min.	PSL	PL	PS	PW	TW ±0.3	PT (Pitch)	M (MAX)	I	N ±1	F ±0.05
H	7343-43	7.3	4.3	4.1	2.4	1.3	4.40	8.0	2.0	4.0	3.0	12	8	4.8	1.5	13	5.5
Z	7361-38	7.3	6.1	3.45	3.1	1.4	4.40	8.0	2.0	4.0	3.7	12	8	4.8	1.5	13	5.5

**REFLOW PROFILE** **MARKING**



Tantalum capacitors are lead-free system compatible system components, meeting the requirements of J-STD-020 standard. Maximum peak temperature 260°C for 10 seconds maximum, 3 reflow cycles.

- There are several important general soldering considerations for tantalum capacitors.
- Soldering temperature and time should be the minimum for a good connection.
  - Recommended soldering profiles are designed to insure that the temperature of the internal construction of the capacitors does not exceed +220°C.
  - Positioning capacitors near components radiating heat such as power transistors should be avoided.
  - Allow for an increase to ESR ratings of 1.25 x catalog limit post PCB assembly.



*NEMCO reserves the right to supply a higher voltage rating, tighter tolerance and/or lower ESR in the same case size, to the same reliability standards.*

## RATINGS AND PART NUMBER REFERENCE

4 V DC @ 85°C									
Capacitance (µF)	Case Size	ESR @ 100kHz max. (mΩ)	Nemco Part No.	Category Voltage	DCL (µA) max	tan δ max. (%)	Max. Ripple Current @100kHz mA (milliamps)		
							25°C	85°C	105°C
1000	H	10	MPT1000 / 4H_10	3.2	400.0	8	6400	4500	2900
1000	H	10	MPT1000 / 4H_12	3.2	400.0	8	5800	4100	2600

6.3 V DC @ 85°C									
680	H	12	MPT680 / 6H_12	5	408	8	5800	4100	2600

10 V DC @ 85°C									
330	H	10	MPT330 / 10H_10	8	330	8	6400	4500	2900
330	H	15	MPT330 / 10H_15	8	330	8	5200	3600	2300

35 V DC @ 85°C									
22	H	25	MPT22 / 35H_25	28	77	8	4000	2800	1800

100 V DC @ 85°C									
10	Z	50	MPT10 / 100Z_50	80	100	8	2900	2000	1300

## PACKAGING REFERENCE

CASE SIZE	CASE SIZE	STANDARD PACKAGING	AVAILABLE
NEMCO	EIA IECQ	7" Reel Quantity	13" Reel Quantity
H Z	7343-43 7361-37	<b>400</b> <b>400</b>	1500 1500

\_ Insert tolerance M(±20%) to complete the Nemco part number  
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