



**THE DATASHEET OF
T523H107M035APE070**



Preliminary Specification

KO-CAP (KEMET Organic Capacitor)

T523H107M035APE070: 7360-20, 100 uF, 35 V, 70 mΩ

KOCAP

Polymer Capacitors

Environmental Compliance

RoHS Compliant (6/6) per EU Directive 2002/95/EC

Halogen Free

Part Number Information

| Capacitor Class | Series | Case Size | Capacitance Code | Capacitance Tolerance | Voltage | Failure Rate/ Design | Lead Material | ESR Code | |
|-----------------|----------------------------|--------------|------------------|-----------------------|-------------|----------------------|-------------------------|---------------|--|
| T Tantalum | 523 Facedown Polymer | H 7360-20 | 107 100 uF | M ± 20% | 035 35 V | A N/A | P Ni-Pd-Au Plated | E070 70 mΩ | |

Performance Characteristics

| KEMET Part Number | Rated Voltage (V) | Rated Capacitance (uF) | DC Leakage μA @ V_r , 25°C Maximum/ 5 Minutes | DF % @ 25°C, 120 Hz Maximum | ESR mΩ @ 25°C 100kHz Maximum | Maximum Allowable Ripple Current mA rms @ 45° C 100kHz | MSL Reflow Temp $\leq 260^\circ\text{C}$ | Maximum Operating Temperature $^\circ\text{C}$ |
|--------------------|-------------------|------------------------|--|-----------------------------------|---------------------------------------|---|--|---|
| T523H107M035APE070 | 35 | 100 | 350 | 10 | 70 | 2500 | 3 | 85 |

Qualification

| Test | Condition | Characteristics | | | |
|-----------------------------|--|---------------------------|------------------------------------|---------------|---------------------|
| Endurance | 85° C @ Rated Voltage, 2000 hours | $\Delta\text{C}/\text{C}$ | Within -20/+10% of initial value | | |
| | | DF | Within initial limit | | |
| | | DCL | Within 1.25 x initial limit | | |
| | | ESR | Within 2.0 x initial limit | | |
| Storage | 85° C @ 0 Volts, 2000 hours | $\Delta\text{C}/\text{C}$ | Within -20/+10% of initial value | | |
| | | DF | Within initial limit | | |
| | | DCL | Within 1.25 x initial limit | | |
| | | ESR | Within 2.0 x initial limit | | |
| Humidity | 60° C, 90% RH, 500 hours, No Load | $\Delta\text{C}/\text{C}$ | Within -5/+35% of initial value | | |
| | | DF | Within initial limit | | |
| | | DCL | Within 5.0 x initial limit | | |
| | | ESR | Within 2.0 x initial limit | | |
| Temperature Stability | Extreme temperature exposure at a succession of continuous steps at +25°C, -55°C, +25°C, +85°C, +25°C | | +25°C | -55°C | +85°C |
| | | $\Delta\text{C}/\text{C}$ | Initial Limit | +20% | +20% |
| | | DF | Initial Limit | Initial Limit | 1.2 x Initial Limit |
| | | DCL | Initial Limit | N/A | 10 x Initial Limit |
| Surge Voltage | 85° C, 1.32 x Rated Voltage, 33 Ω Resistance, 1000 cycles | $\Delta\text{C}/\text{C}$ | Within -20/+10% of initial value | | |
| | | DF | Within initial limit | | |
| | | DCL | Within initial limit | | |
| | | ESR | Within initial limit | | |
| Mechanical Shock/ Vibration | MIL-STD-202, Method 213, Condition I, 100G Peak MIL-STD-202, Method 204, Condition D, 10 Hz to 2000 Hz, 20G Peak | $\Delta\text{C}/\text{C}$ | Within $\pm 10\%$ of initial value | | |
| | | DF | Within initial limit | | |
| | | DCL | Within initial limit | | |

The Capacitance Company
KEMET
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Preliminary Specification

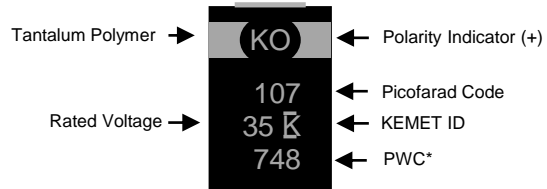
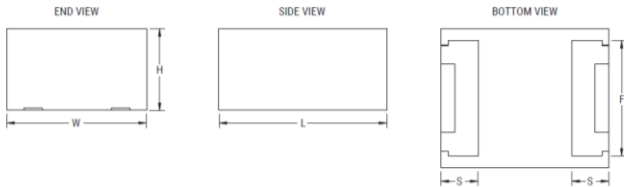
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Dimensions (units: mm)

| Case Size | | Component Dimensions | | | | |
|-----------|---------|----------------------|-----------|------------|-------------|-------------|
| KEMET | EIA | L | W | H | F | S |
| H | 7360-20 | 7.3 ± 0.3 | 6.0 ± 0.3 | 1.9 ± 0.10 | 4.45 ± 0.10 | 1.60 ± 0.30 |

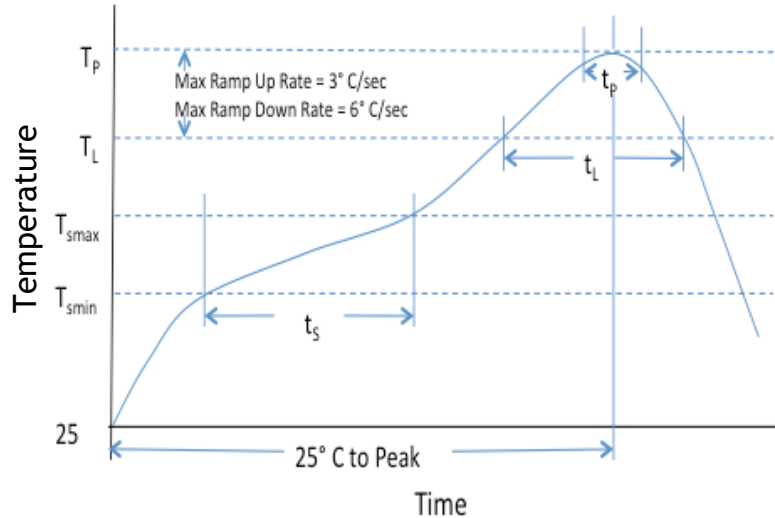


* 748 = 48th week of 2017

Manufacturing Location(s)

| | Continent | Country | Region |
|-------------------------|---------------|--------------|------------------------------|
| Fabrication Site | North America | US | South Carolina |
| Assembly/Packaging Site | North America | US | South Carolina |
| Test Site | North America | US Mexico | South Carolina Tamaulipas |

Reflow Profile



| Profile Feature | Pb-Free Assembly |
|--|---------------------|
| Preheat/Soak | |
| Temperature Minimum (T_{smin}) | 150° C |
| Temperature Maximum (T_{smax}) | 200° C |
| Time (t_s) from T_{smin} to T_{smax} | 60-120 seconds |
| Ramp-up Rate (T_L to T_p) | 3° C/sec maximum |
| Liquidous Temperature (T_L) | 217° C |
| Time Above Liquidous (t_L) | 60-150 seconds |
| Peak Temperature (T_p) | 250° C* 260° C** |
| Time within 5° C of Maximum Peak Temperature (t_p) | 30 seconds maximum |
| Ramp-down Rate (T_p to T_L) | 6° C/second maximum |
| Time 25° C to Peak Temperature | 8 minutes maximum |

Note: All temperatures refer to the center of the package, measured on the package body surface that is facing up during assembly reflow.

* Package Thickness ≥ 2.5 mm

** Package Thickness < 2.5 mm

The Customer acknowledges the following limitations of the prototype samples: (1) prototype samples are manufactured from preliminary designs and manufacturing processes, may not represent final designs, have not been released for commercial use and are not subject to the same quality control procedures applicable to released products; (2) prototype samples are not qualified parts and are provided as-is by KEMET Electronics Corporation, which specifically disclaims any and all warranties and guarantees, explicit or implied, including without limitation the warranties of merchantability and fitness for a particular purpose or use; (3) prototype samples are not intended for commercial use, are provided for engineering evaluation only and are not recommended for use in the Customer's production line; and (4) the Customer assumes the risk of any and all uses that the Customer makes of the prototype samples.

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