

The KEMET Micron Series is available in a variety of case styles and sizes. They are designed to operate from -55°C to +85°C at full voltage and to +125°C with derating. Typical applications include use in bypass coupling, filtering, and timing circuits.

The KEMET Micron Series is qualified under MIL-PRF-49137/6 as military styles CX06 (T378 Series).

The KEMET T370 Series is encapsulated in a molded gold color epoxy. This encasement technique allows maximum utilization of circuit board real estate with precisely centered leads in a microminature case.

These molded packages also provide significant improvements in overall dimensional consistency as well as lead wires precisely spaced to within .010 inches (.25mm).

With our new molded packaging design, these capacitors can now be marked using our laser printing technique. The KEMET laser marking system ensures legibility and permanency while offering a complete alphanumeric print format. Laser print meets all requirements of the Resistance to Solvents Test, method 215 of MIL-STD-202.

## PERFORMANCE CHARACTERISTICS

- **CAPACITANCE/VOLTAGE RANGE:**  
T370 Series: 0.68-220µF, 3-35 Volts.  
T378 Series: 2.2-220µF, 3-35 Volts.
- **CAPACITANCE TOLERANCE:** Available in standard EIA nominal values with ± 20% tolerance standard, +40% -20%, ±10% and ±5% are also available.
- **DISSIPATION FACTOR:** Maximum DF limits are shown in corresponding series part number listings on page 57. See Application Notes Section, page 2 for additional information.
- **DC LEAKAGE CURRENT:** Maximum leakage values at 25° are shown in part number listings, page 57. See Application Notes Section, page 2 for additional information.
- **RATED VOLTAGE; WORKING VOLTAGE; SURGE VOLTAGE; REVERSE VOLTAGE:** See Application Notes Section, pages 2 & 3 for description.
- **IMPEDANCE and ESR:** See Application Notes Section, pages 3 & 4 for description. Reference ESR values are listed in table below.
- **AC RIPPLE VOLTAGE:** Permissible AC ripple volt-

age is related to the ESR of the capacitor and the power dissipation capabilities of a particular case size. Thermal capacities for the various case sizes have been determined and are listed in Table below. For additional description see page 4.

### • ENVIRONMENTAL CONSIDERATIONS:

Case Size	Watts
C	.070
D	.080
E	.090
F	.100

Maximum Power Dissipation Capability @ 25°C

- A. Shock Test: MIL-STD-202, Method 213 Condition 1.
- B. Thermal Shock, MIL-STD-202, Method 107.
- C. Moisture Resistance: MIL-STD-202, Method 106.
- D. Solderability: MIL-STD-202, Method 208.

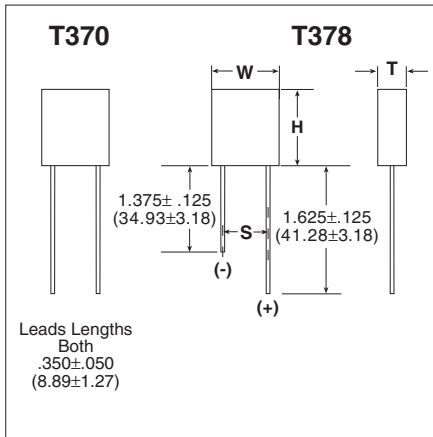
For additional Environmental Test Information see pages 6, 7, and 8.

- **LEAD MATERIAL:** Solder coated nickel per MIL-STD1266, type N32.
- **LEAD TAPE and REEL:** Reeling per specification RS-468. See pages 61 and 62 for additional information.

**T370 ESR (OHMS) at 100 kHz @ +25°C**  
(The ESR values provided below are for reference only. No warranty, as stated on page 3 and reincorporated here, is made as to the accuracy of these values for any particular T370 Series product.)

Cap. µF	6 Volt	10 Volt	15 Volt	20 Volt	25 Volt	35 Volt
0.68						10.0
1.00						8.0
1.50						6.0
2.20					6.0	5.0
3.30				5.5	5.0	4.0
4.70				4.5	4.0	3.0
6.80		6.0		3.6	3.1	2.5
10.0	6.0	5.0		2.9	2.5	2.0
15.0	5.0	3.7	2.5	2.3	2.0	1.6
22.0	3.7	2.7	2.0	1.8	1.5	1.3
33.0	3.0	2.1	1.6	1.4	1.2	
47.0	2.0	1.7	1.3	1.2		
68.0	1.8	1.3	1.0			
100.0	1.6	1.0				
150.0	0.9					

**CAPACITOR OUTLINE DRAWING**



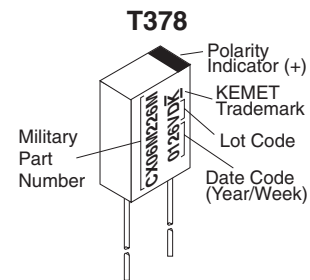
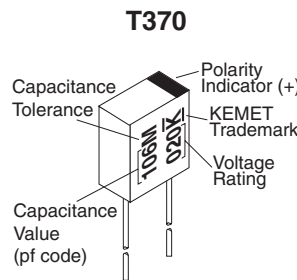
**DIMENSIONS - INCHES (MILLIMETER)**

CASE SIZE	H MAX.	W MAX.	T MAX.	S LEAD SPACING	LEAD DIAMETER .001 (.03)
C	.225 (5.72)	.185 (4.70)	.075 (1.91)	.150 ± .010 (3.81 ± .25)	.016 (.41)
D	.290 (7.37)	.220 (5.59)	.110 (2.79)	.180 ± .010 (4.57 ± .25)	.016 (.41)
E	.310 (7.87)	.230 (5.84)	.130 (3.30)	.200 ± .010 (5.08 ± .25)	.016 (.41)
F	.475 (12.07)	.375 (9.53)	.150 (3.81)	.300 ± .010 (7.62 ± .25)	.016 (.41)

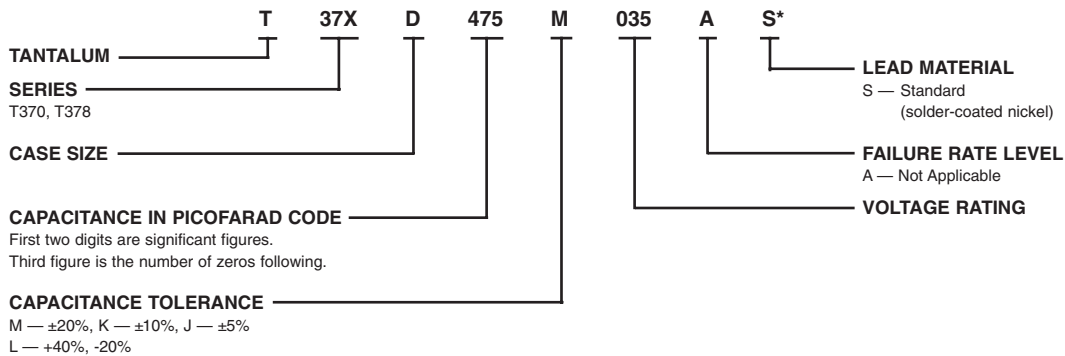
**CAPACITOR MARKING**

**INDUSTRIAL PRODUCT**

**MILITARY PRODUCT**

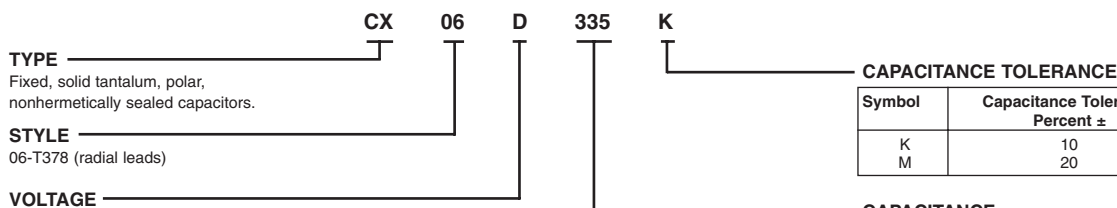


**ORDERING INFORMATION  
KEMET PART NUMBER**



\*Part Number Example: T370D475M035AS (14 digits – no spaces)

**MIL-PRF-49137/6 PART NUMBER  
CX06(T378) STYLE**



Symbol	Capacitance Tolerance Percent ±
K	10
M	20

Symbol	Rated (85°C) Volts, dc	Surge (85°C) Volts, dc
A	2	2.6
B	3	4
C	4	5
D	6	8
F	10	13
H	15	20
J	20	26
K	25	32
M	35	46

**CAPACITANCE**  
The nominal capacitance value, expressed in picofarads (pF), is identified by a three digit number. The first two digits represent significant figures and the last digit specifies the number of zeros to follow.

## RATINGS & PART NUMBER REFERENCE

CAPACITANCE μF	CASE SIZE	INDUSTRIAL PRODUCT KEMET T370 PART NUMBER	MILITARY CX06 PRODUCT PART NUMBER	KEMET MILITARY EQUIVALENT PRODUCT T378 PART NUMBER	MAX. D.C. LEAKAGE μA@25°C	MAX. DISSIPATION FACTOR % @ 25°C 120Hz
<b>3 VOLT RATING AT 85°C – 2 VOLT RATING AT 125°C</b>						
220.0	F	T370F227(1)003AS	CX06B227(2)	T378F227(3)003AS	9.0	15
<b>4 VOLT RATING AT 85°C – 2.7 VOLT RATING AT 125°C</b>						
15.0	C	T370C156(1)004AS	CX06C156(2)	T378C156(3)004AS	1.0	8.0
47.0	D	T370D476(1)004AS	CX06C476(2)	T378D476(3)004AS	2.0	8.0
68.0	E	T370E686(1)004AS	CX06C686(2)	T378E686(3)004AS	3.0	8.0
<b>6 VOLT RATING AT 85°C – 4 VOLT RATING AT 125°C</b>						
10.0	C	T370C106(1)006AS	CX06D106(2)	T378C106(3)006AS	1.0	6.0
33.0	D	T370D336(1)006AS	CX06D336(2)	T378D336(3)006AS	2.0	6.0
47.0	E	T370E476(1)006AS	CX06D476(2)	T378E476(3)006AS	3.0	6.0
150.0	F	T370F157(1)006AS	CX06D157(2)	T378F157(3)006AS	9.0	10.0
<b>10 VOLT RATING AT 85°C – 7 VOLT RATING AT 125°C</b>						
6.8	C	T370C685(1)010AS	CX06F685(2)	T378C685(3)010AS	1.0	6.0
22.0	D	T370D226(1)010AS	CX06F226(2)	T378D226(3)010AS	2.0	6.0
33.0	E	T370E336(1)010AS	CX06F336(2)	T378E336(3)010AS	3.0	6.0
100.0	F	T370F107(1)010AS	CX06F107(2)	T378F107(3)010AS	9.0	8.0
<b>15 VOLT RATING AT 85°C – 10 VOLT RATING AT 125°C</b>						
15.0	D	T370D156(1)015AS	CX06H156(2)	T378D156(3)015AS	2.0	6.0
22.0	E	T370E226(1)015AS	CX06H226(2)	T378E226(3)015AS	3.0	6.0
68.0	F	T370F686(1)015AS	CX06H686(2)	T378F686(3)015AS	9.0	8.0
<b>20 VOLT RATING AT 85°C – 13 VOLT RATING AT 125°C</b>						
3.3	C	T370C335(1)020AS	CX06J335(2)	T378C335(3)020AS	1.0	6.0
4.7	C	T370C475(1)020AS	CX06J475(2)	T378C475(3)020AS	1.0	6.0
10.0	D	T370D106(1)020AS	CX06J106(2)	T378D106(3)020AS	2.0	6.0
15.0	E	T370E156(1)020AS	CX06J156(2)	T378E156(3)020AS	3.0	6.0
47.0	F	T370F476(1)020AS	CX06J476(2)	T378F476(3)020AS	9.0	8.0
<b>25 VOLT RATING AT 85°C – 17 VOLT RATING AT 125°C</b>						
2.2	C	T370C225(1)025AS	CX06K225(2)	T378C225(3)025AS	1.0	6.0
6.8	D	T370D685(1)025AS	CX06K685(2)	T378D685(3)025AS	2.0	6.0
10.0	E	T370E106(1)025AS	CX06K106(2)	T378E106(3)025AS	3.0	6.0
33.0	F	T370F336(1)025AS	CX06K336(2)	T378F336(3)025AS	9.0	6.0
<b>35 VOLT RATING AT 85°C – 23 VOLT RATING AT 125°C</b>						
0.68	C	T370C684(1)035AS	CX06M684(2)	T378C684(3)035AS	1.0	6.0
1.0	C	T370C105(1)035AS	CX06M105(2)	T378C105(3)035AS	1.0	6.0
1.5	C	T370C155(1)035AS	CX06M155(2)	T378C155(3)035AS	1.0	6.0
2.2	D	T370D225(1)035AS	CX06M225(2)	T378D225(3)035AS	2.0	6.0
3.3	D	T370D335(1)035AS	CX06M335(2)	T378D335(3)035AS	2.0	6.0
4.7	D	T370D475(1)035AS	CX06M475(2)	T378D475(3)035AS	2.0	6.0
6.8	E	T370E685(1)035AS	CX06M685(2)	T378E685(3)035AS	3.0	6.0
10.0	F	T370F106(1)035AS	CX06M106(2)	T378F106(3)035AS	9.0	6.0
15.0	F	T370F156(1)035AS	CX06M156(2)	T378F156(3)035AS	9.0	6.0
22.0	F	T370F226(1)035AS	CX06M226(2)	T378F226(3)035AS	9.0	6.0

(1) To complete KEMET part number, insert capacitance tolerance symbol as follows: L = +40%, -20%; M = ±20%; K = ±10%; J = ±5%.

(2) To complete military part number, insert capacitance tolerance symbol as follows: M = ±20%; K = ±10%.

(3) To complete KEMET part number, insert capacitance tolerance symbol as follows: M = ±20%; K = ±10%.