SMD Common Mode Chokes

#### **ACM7060F Series**

#### **FEATURES**

- Winding type realizes small size and low profile
- Prevention of common mode noise at high frequency
- Excellent solderability
- Operating temperature -40~+125 °C (Including self temperature rise)
- RoHS Compliant

#### **FEATURES**

- Power line noise countermeasure for electronic equipment (Notebook, server applications, Battery, etc.)
- Best for high current circuit such as car
- Wireless charging and power device design

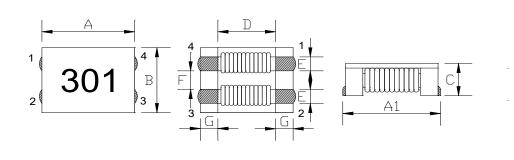
#### **Explanation of Part Number**

ACM 7060 F- 701 T40

1 2 3 4 5 6

- ▲ 1:Product Series:Wire Wound Common Mode Chokes
- ♦ 2:Dimensions:
- ♦ 3: Material Code:Ferrite
- 4:Common Mode Impedance(Ω)
- ♦ 5:Packing(Tape & Reel)
- ♦ 6:Rated Current:40=4.0A

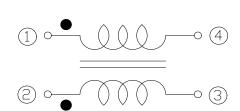
## Shapes and Dimensions [Dimensions in mm]



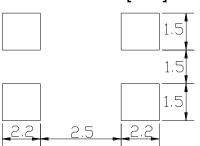
<b>A1</b> :	7.5±0.5	mm
B:	6.0±0.5	mm
C:	3.8Max.	mm
D:	3.5Тур.	mm
E:	1.5±0.2	mm
F:	1.5±0.2	mm
G:	1.75±0.2	mm

A: 7.0±0.5

## Equivalent circuit



## Land Pattern: [mm]







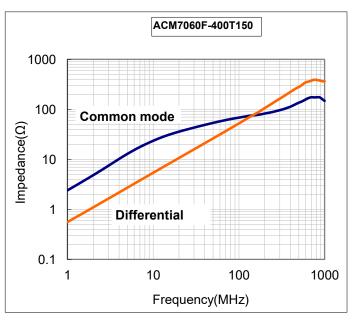
## **Electrical Characterisitics:**

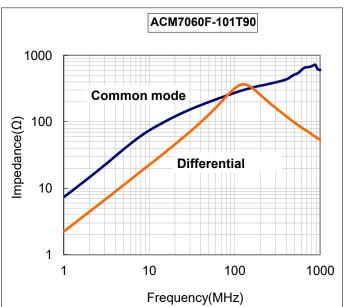
PT/NO.	Impedance(Ω) at 100MHz		Resistance RDC(Ω) Max.(1 line)	Rated Current	Insulation Resistance	Rated Voltage (V)Max.
	Min.	Тур.		(A) Max.	(MΩ) Min.	( )
ACM7060F-400T150	40	70	5m	15	10	125
ACM7060F-101T90	100	140	10m	9.0	10	125
ACM7060F-301T50	225	300	10m	5.0	10	125
ACM7060F-501T50	275	350	10m	5.0	10	125
ACM7060F-601T40	500	700	15m	4.0	10	125
ACM7060F-701T40	500	700	15m	4.0	10	125
ACM7060F-102T30	800	1020	17m	3.0	10	125
ACM7060F-132T25	910	1300	21m	2.5	10	125
ACM7060F-272T10	2000	2700	63m	1.0	10	125
ACM7060F-302T09	2500	3000	75m	0.9	10	125

Rated Current : Based on temperature rise ( $\triangle T$ : 40°C TYP.)

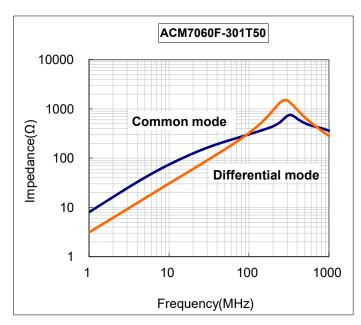
## TYPICAL ELECTRICAL CHARACTERISTICS

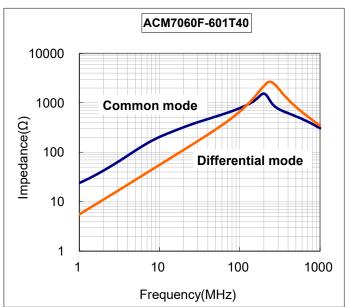
## Impedance VS. Frequency

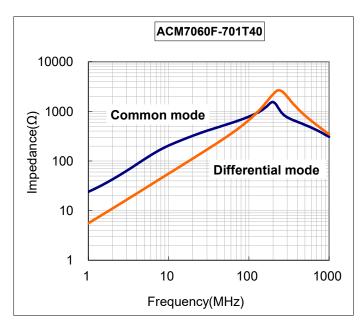


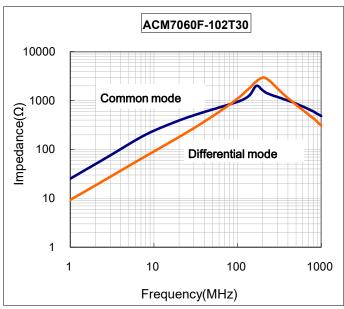


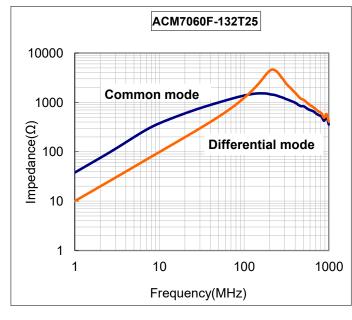


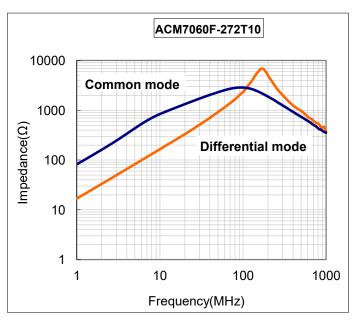




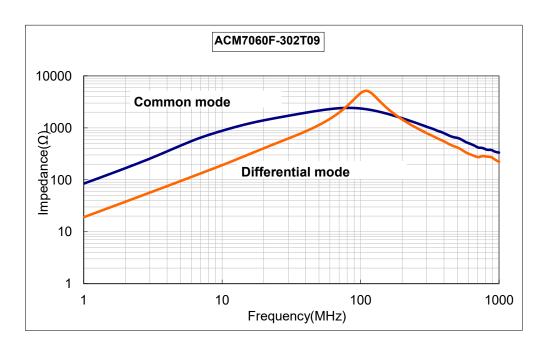








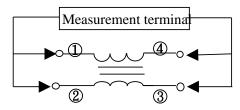




# **TEST EQUIPMENT**

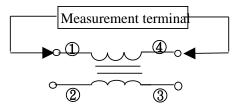
#### **Impedance**

Measured by using HP4291B RF Impedance Analyzer.



#### **DC** Resistance

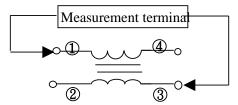
Measured by using Chroma 16502 milliohm meter.



#### **Insulation Resistance**

Measured by using Chroma 19073

Measurement voltage: 50v, Measurement time: 60 sec.





# **Reliability Test**

### **MECHANICAL**

TEST ITEM	SPECIFICATION	TEST DETAILS	
Solder ability	The product shall be connected to the test	Apply cream solder to the printed circuit board .	
	circuit board by the fillet (the height is 0.2mm).	Refer to clause 8 for Reflow profile.	
Resistance to	There shall be no damage or problems.	Temperature profile of reflow soldering	
Soldering heat		© 300 — soldering (Peak temperature 260±3°ℂ 10 sec)	
(reflow soldering)		Soldering (Peak temperature 260±3°C 10 sec)  Pre-heating  150  Slow cooling (Stored at room temperature)	
		200 — 30 sec Min (230°° °C)	
		g 150 Pre-heating Slow cooling	
		150 ~ 180°C (Stored at room temperature)	
		50 -	
		2 min   10   2 min, or more	
		The specimen shall be passed through the reflow oven	
		with the condition shown in the above profile for 1 time.  The specimen shall be stored at standard atmospheric	
		eric conditions for 1 hour, after which the measurement	
		shall be made.	
		Shan be made.	
Terminal strength	The terminal electrode and the ferrite must	Solder a chip to test substrate , and then laterally apply	
	not damaged.	a load 9.8N in the arrow direction.	
		Printed circuit board of 1.0	
Strength on PC board	The terminal electrode and the ferrite must	Solder a chip to test substrate and then apply a load.	
bending	not damaged.	10 20	
		Test board:FR4 100×40×1mm	
		R10 Fall speed:1mm/sec.	
		***	
		Dimensions in mm	
High	Impedance:Within±20% of the initial value.	After the samples shall be soldered onto the test circuit	
temperature	Insulation resistance and DC resistance on the	board,the test shall be done.	
resistance	specification(refer to clause 2-1) shall be met.	Measurement : After placing for 24 hours min.	
	The terminal electrode and the ferrite must not	Temperature : +125±2℃	
	damaged.	Applied voltage : Rated voltage	
		Applied current : Rated current	
		Testing time : 500±12 hours	



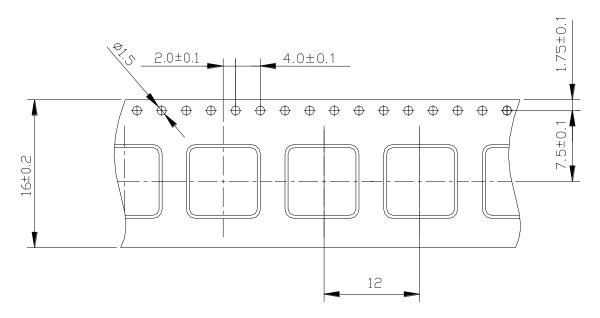
### **MECHANICAL**

TEST ITEM	SPECIFICATION	TEST DETAILS	
Humidity	Impedance:Within±20% of the initial value.	After the samples shall be soldered onto the test circuit	
resistance	Insulation resistance and DC resistance on the	board,the test shall be done.	
	specification(refer to clause 2-1) shall be met.	Measurement : After placing for 24 hours min.	
	The terminal electrode and the ferrite must not	Temperature : +60±2℃ , Humidity : 90 to 95 %RH	
	damaged.	Applied voltage : Rated voltage	
		Applied current : Rated current	
		Testing time : 500±12 hours	
Thermal shock	Impedance:Within±20% of the initial value.	1 cycle	
	Insulation resistance and DC resistance on the		
	specification(refer to clause 2-1) shall be met.	+125°C 30 sec	
	The terminal electrode and the ferrite must		
	not damaged.	-40°C +\ \ \ 30 min.	
Low	Impedance:Within±20% of the initial value.	After the samples shall be soldered onto the test	
temperature	Insulation resistance and DC resistance on the	circuit board,the test shall be done.	
storage	specification(refer to clause 2-1) shall be met.	Measurement : After placing for 24 hours min.	
	The terminal electrode and the ferrite must	Temperature : -40±2℃	
	not damaged.	Testing time : 500±12 hours	
Vibration	Impedance:Within±20% of the initial value.	After the samples shall be soldered onto the test circuit	
	Insulation resistance and DC resistance on	board,the test shall be done.	
	the specification(refer to clause 2-1)	Frequency : 10 to 55 Hz	
	shall be met.	Amplitude : 1.52 mm	
	The terminal electrode and the ferrite must	Dimension and times : X ,Y and Z directions	
	not damaged.	for 2 hours each.	
Solderability	New solder More than 75%	Flux (rosin, isopropyl alcohol{JIS-K-1522}) shall be coated	
		over the whole of the sample before hard, the sample shall	
		then be preheated for about 2 minutes in a temperature	
		of 130∼150℃ and after it has been immersed to a depth	
		0.5mm below for 3±0.2 seconds fully in molten solder	
		M705 with a temperature of 245±2°C. More than 75% of the	
		electrode sections shall be couered	
		with new solder smoothly when the sample is taken out	
		of the solder bath.	

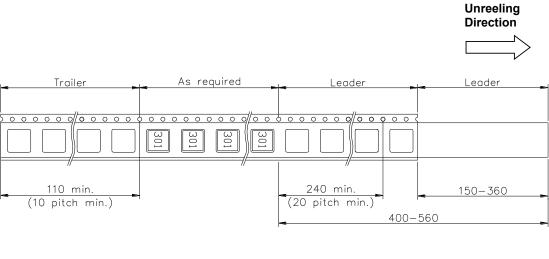


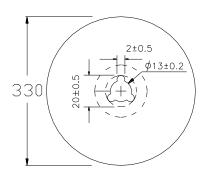
# **Packaging**

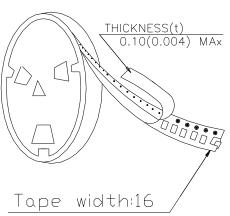
## **CARRIER TAPE DIMENSIONS (mm)**



## **TAPING DIMENSIONS (mm)**







# **Packing Quantity**

1500 pcs./reel

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