

## FEATURES

- Winding type realizes small size and low profile.
- Excellent solderability .
- Prevention of common mode noise at high frequency.
- Operating Temperature: -40℃~+85℃ .
- RoHS, Halogen Free and REACH Compliance.



## APPLICATIONS

- USB2.0 of PC, peripheral equipment's, small digital AV equipment's, etc.
- LVDS lines of Note PC, LCD ,Audio lines.

## PART NUMBERING

AP	CW	2012	-	900	P	2	T	□□
①	②	③		④	⑤	⑥	⑦	⑧
Grade	Series Name	External Dimensions		Nominal Impedance	Impedance Tolerance	Lines	Packaging	Design Code

① Grade	
AP	Grade Code

② Series Name	
CW	Winding Type Common Mode Choke Coil

③ External Dimensions	
	2012 [0805]
	3216 [1206]
	3225 [1210]
	4532[1812]

⑥ Number of Lines	
	2

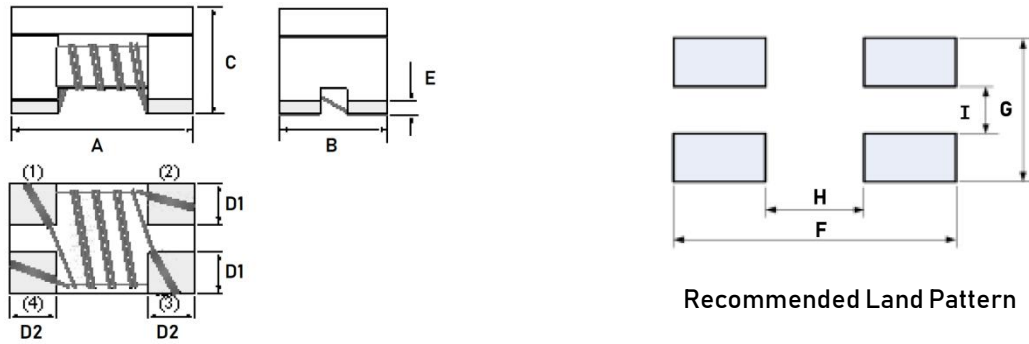
④ Nominal Impedance	
Code (example)	Nominal Impedance [ $\Omega$ ]
900	90
121	120
102	1000

⑦ Packaging	
T	Tape & Reel

⑤ Impedance Tolerance	
Code (example)	Impedance Tolerance
P	±25%
N	±30%

⑧ Design Code	
□□	Standard product is blank

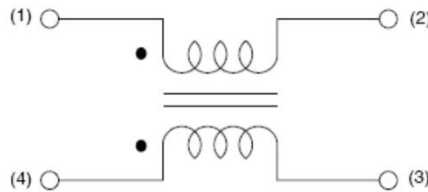
**DIMENSIONS & RECOMMENDED LAND PATTERN**



Unit: mm

Series	Dimensions						Recommended Land Pattern			
	A	B	C	E	D1 Typ.	D2 Typ.	F Typ.	G Typ.	I Typ.	H Typ.
APCW2012	2.0±0.2	1.2±0.2	1.2±0.2	0.2±0.1	0.55	0.46	2.6	1.25	0.4	0.8
APCW3216	3.2±0.2	1.6±0.2	1.9±0.2	0.2±0.1	0.7	0.6	3.5	1.6	0.4	1.9
APCW3225	3.2±0.2	2.5±0.2	2.1±0.2	0.2±0.1	0.8	0.9	4	2.5	0.9	2.2
APCW4532	4.5±0.2	3.2±0.2	2.8±0.2	0.2±0.1	1	1.2	5.10	3.6	1.05	3.4

**EQUIVALENT CIRCUIT**



**ELECTRICAL CHARACTERISTICS**

● APCW2012 Series

Part Number	Impedance	Rated Voltage	Test Freq.	Heat Rating Current Max.	DC Resistance Max.	Insulation Resistance Min.
Units	Ω	Volts	MHz	mA	Ω	MΩ
Symbol	Z	VDC	Freq.	I <sub>rms</sub>	DCR	IR
APCW2012-500P2T	50	50	100	400	0.25	10
APCW2012-670P2T	67	50	100	400	0.25	10
APCW2012-900P2T	90	50	100	330	0.35	10
APCW2012-121P2T	120	50	100	370	0.3	10
APCW2012-181P2T	180	50	100	330	0.35	10
APCW2012-221P2T	220	50	100	300	0.4	10
APCW2012-261P2T	260	50	100	300	0.4	10
APCW2012-361P2T	360	50	100	280	0.55	10
APCW2012-601P2T	600	50	100	220	0.6	10
APCW2012-801P2T	800	50	100	300	0.88	10
APCW2012-901P2T	900	50	100	150	0.9	10
APCW2012-102P2T	1000	50	100	150	1.3	10

## ELECTRICAL CHARACTERISTICS

## ● APCW3216 Series

Part Number	Impedance	Rated Voltage	Test Freq.	Heat Rating Current Max.	DC Resistance Max.	Insulation Resistance Min.
Units	$\Omega$	Volts	MHz	mA	$\Omega$	M $\Omega$
Symbol	Z	VDC	Freq.	Irms	DCR	IR
APCW3216-900P2T	90	50	100	370	0.3	10
APCW3216-121P2T	120	50	100	350	0.3	10
APCW3216-161P2T	160	50	100	340	0.4	10
APCW3216-221P2T	220	50	100	300	0.45	10
APCW3216-261P2T	260	50	100	310	0.5	10
APCW3216-361P2T	360	50	100	300	0.6	10
APCW3216-601P2T	600	50	100	260	0.8	10
APCW3216-801P2T	800	50	100	240	0.9	10
APCW3216-102P2T	1000	50	100	230	1	10
APCW3216-142P2T	1400	50	100	220	1	10
APCW3216-202P2T	2000	50	100	200	1.2	10
APCW3216-222P2T	2200	50	100	200	1.2	10

## ● APCW3225 Series

Part Number	Impedance	Rated Voltage	Test Freq.	Heat Rating Current Max.	DC Resistance Max.	Insulation Resistance Min.
Units	$\Omega$	Volts	MHz	mA	$\Omega$	M $\Omega$
Symbol	Z	VDC	Freq.	Irms	DCR	IR
APCW3225-800P2T	80	50	100	640	0.12	10
APCW3225-161P2T	160	50	100	480	0.15	10
APCW3225-271P2T	270	50	100	450	0.25	10
APCW3225-501P2T	500	50	100	1000	0.3	10
APCW3225-601P2T	600	50	100	1000	0.2	10
APCW3225-801P2T	800	50	100	350	0.35	10
APCW3225-102P2T	1000	50	100	480	0.35	10

## ● APCW4532 Series

Part Number	Impedance	Rated Voltage	Test Freq.	Heat Rating Current Max.	DC Resistance Max.	Insulation Resistance Min.
Units	$\Omega$	Volts	MHz	mA	$\Omega$	M $\Omega$
Symbol	Z	VDC	Freq.	Irms	DCR	IR
APCW4532-800P2T	80	50	100	3000	0.05	10
APCW4532-900P2T	90	50	100	3000	0.09	10
APCW4532-121P2T	120	50	100	3000	0.1	10
APCW4532-201P2T	200	50	100	1500	0.1	10
APCW4532-221P2T	220	50	100	1300	0.1	10
APCW4532-331P2T	330	50	100	1100	0.11	10
APCW4532-601P2T	600	50	100	1000	0.12	10
APCW4532-701P2T	700	50	100	1500	0.12	10
APCW4532-801P2T	800	50	100	900	0.16	10

**ELECTRICAL CHARACTERISTICS**

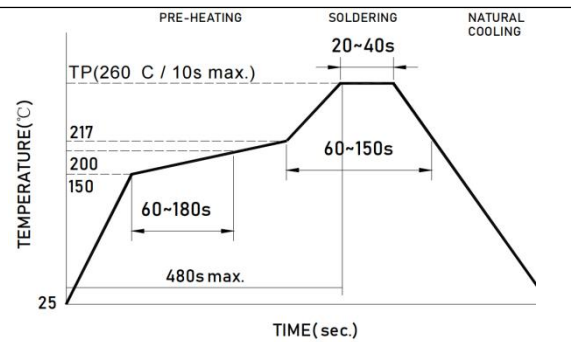
● APCW4532 Series

Part Number	Impedance	Rated Voltage	Test Freq.	Heat Rating Current Max.	DC Resistance Max.	Insulation Resistance Min.
Units	$\Omega$	Volts	MHz	mA	$\Omega$	M $\Omega$
Symbol	Z	VDC	Freq.	Irms	DCR	IR
APCW4532-901P2T	900	50	100	1000	0.17	10
APCW4532-102P2T	1000	50	100	800	0.18	10
APCW4532-142P2T	1400	50	100	700	0.2	10

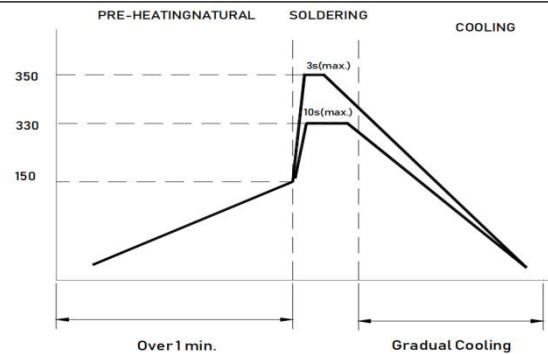
● Rating DC current: Temperature rise ( $\Delta T$ ) is 40 °C approximately at Irms.

**SOLDERING CONDITIONS**

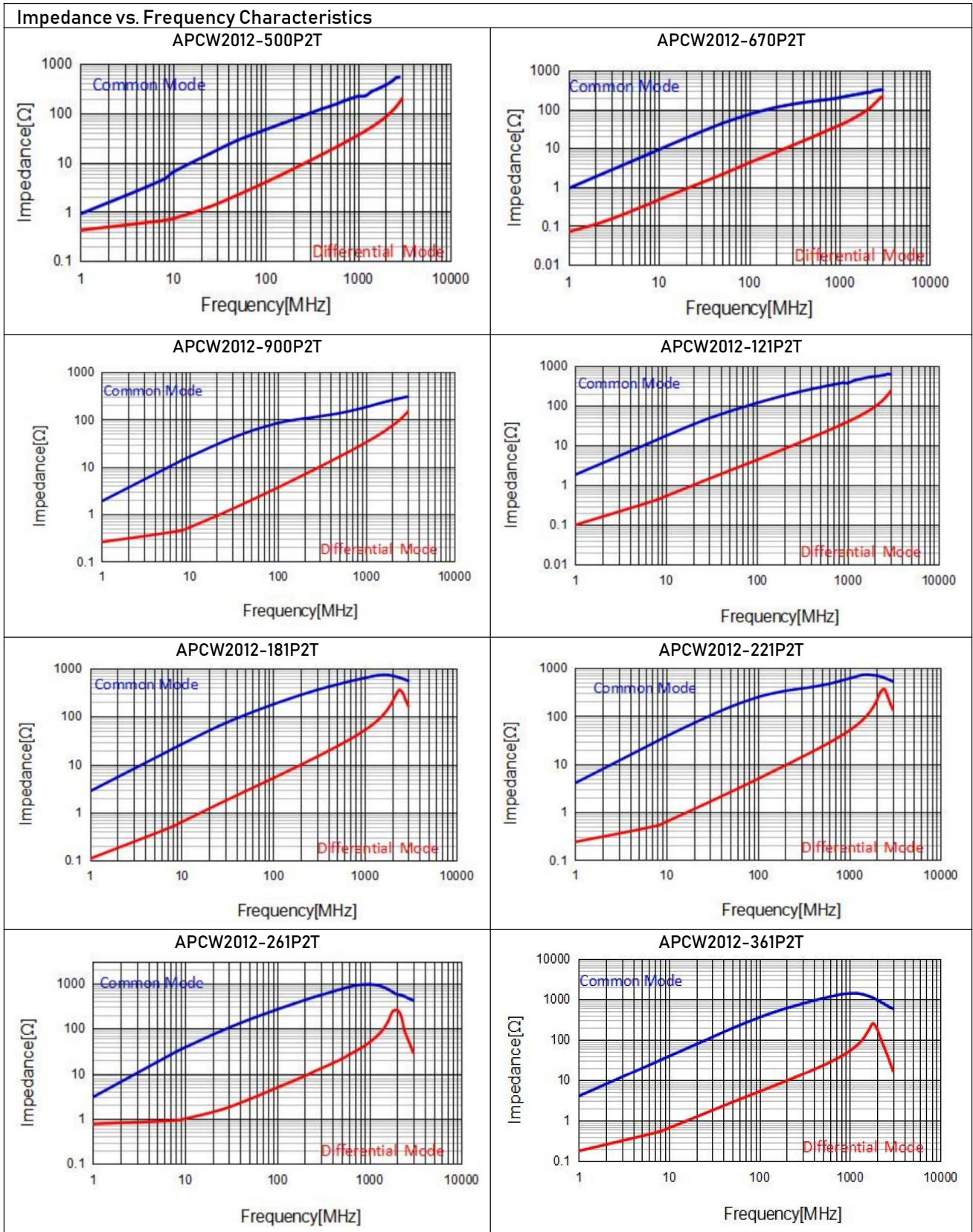
- Preheat circuit and products to 150 °C
- 260 °C tip temperature (max)
- Reflow times: no more than 2 times
- Solder paste thickness: the best 0.08mm is, but max is 0.1mm



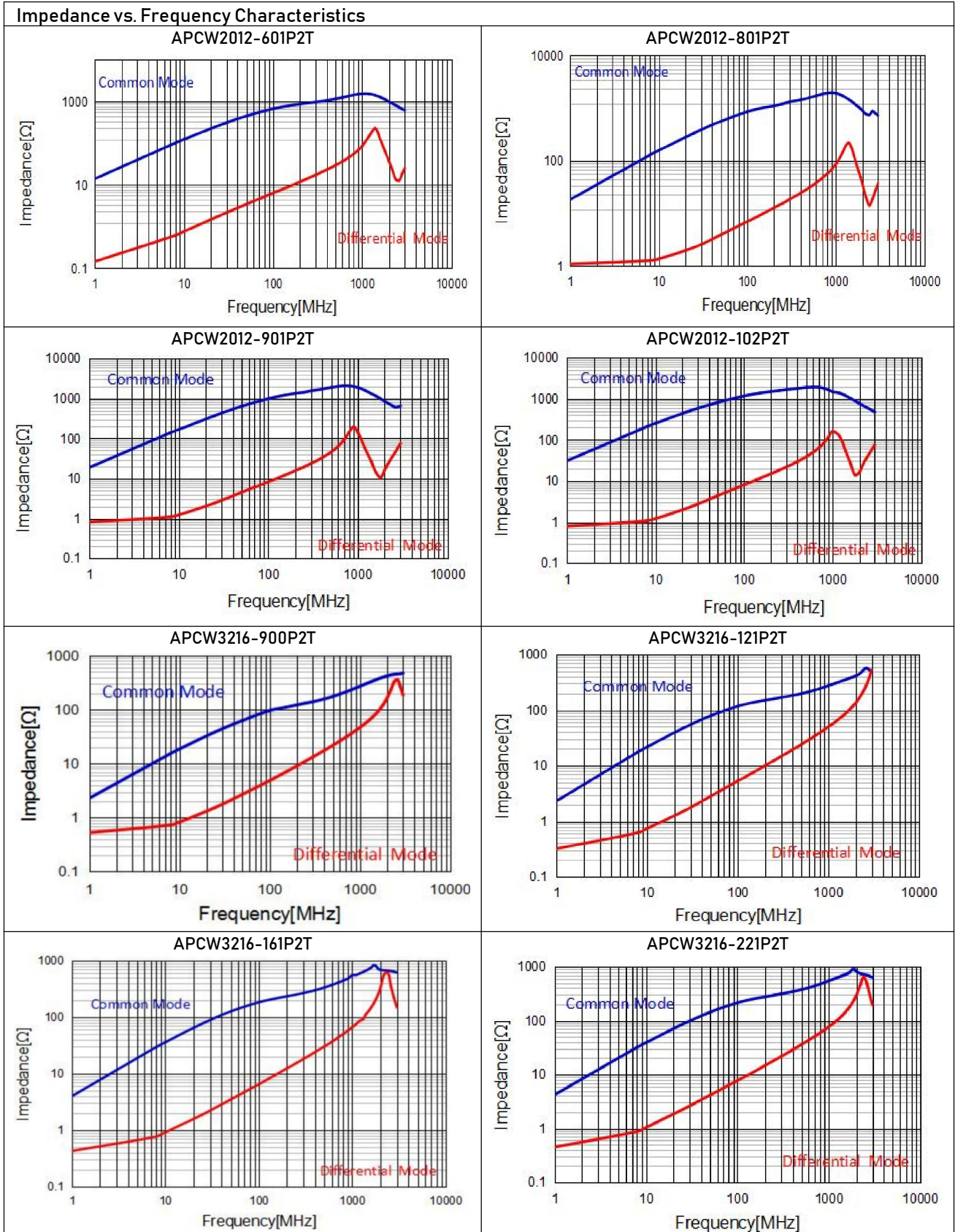
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- Limit soldering time to 3 sec.



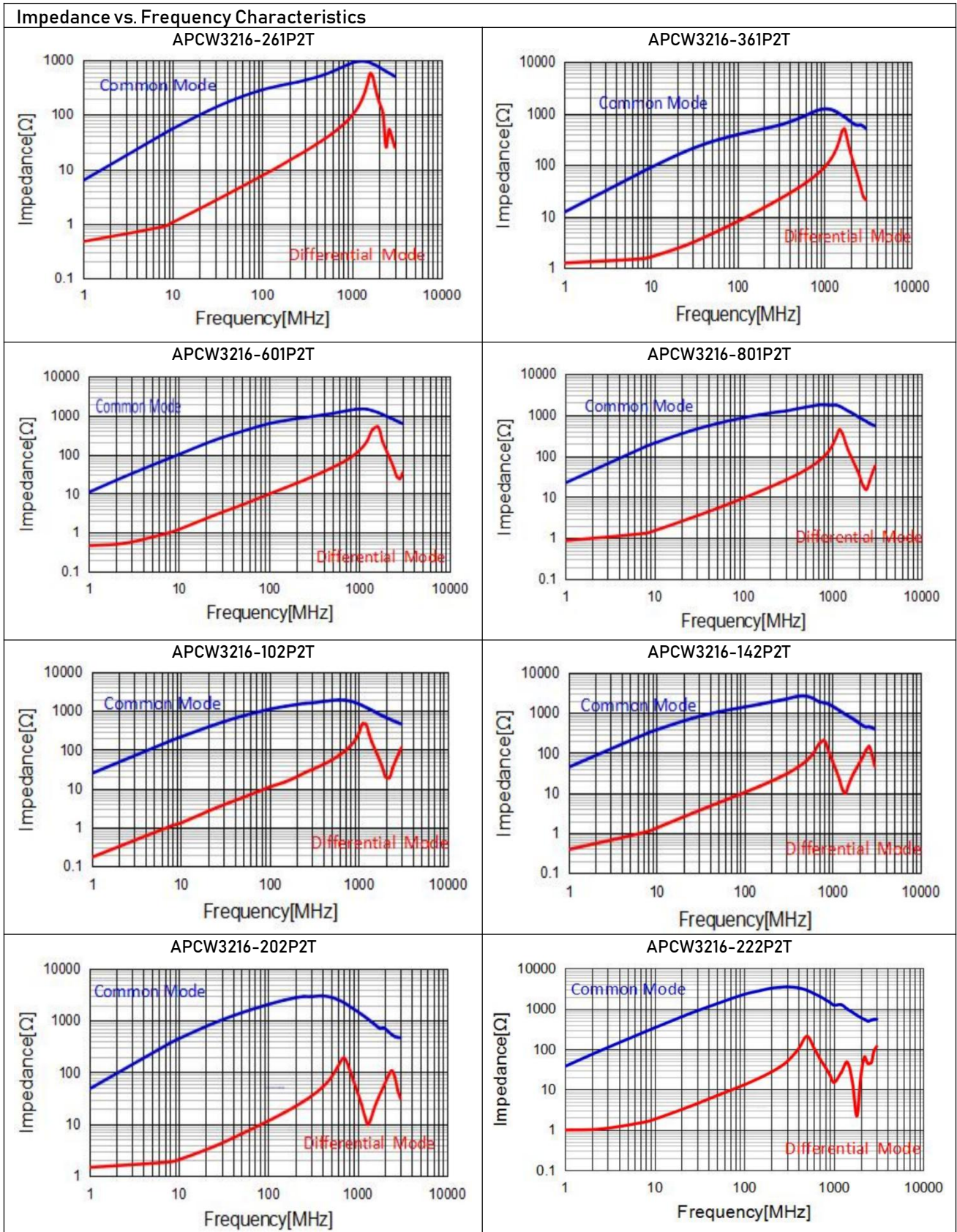
TYPICAL ELECTRICAL CHARACTERISTICS



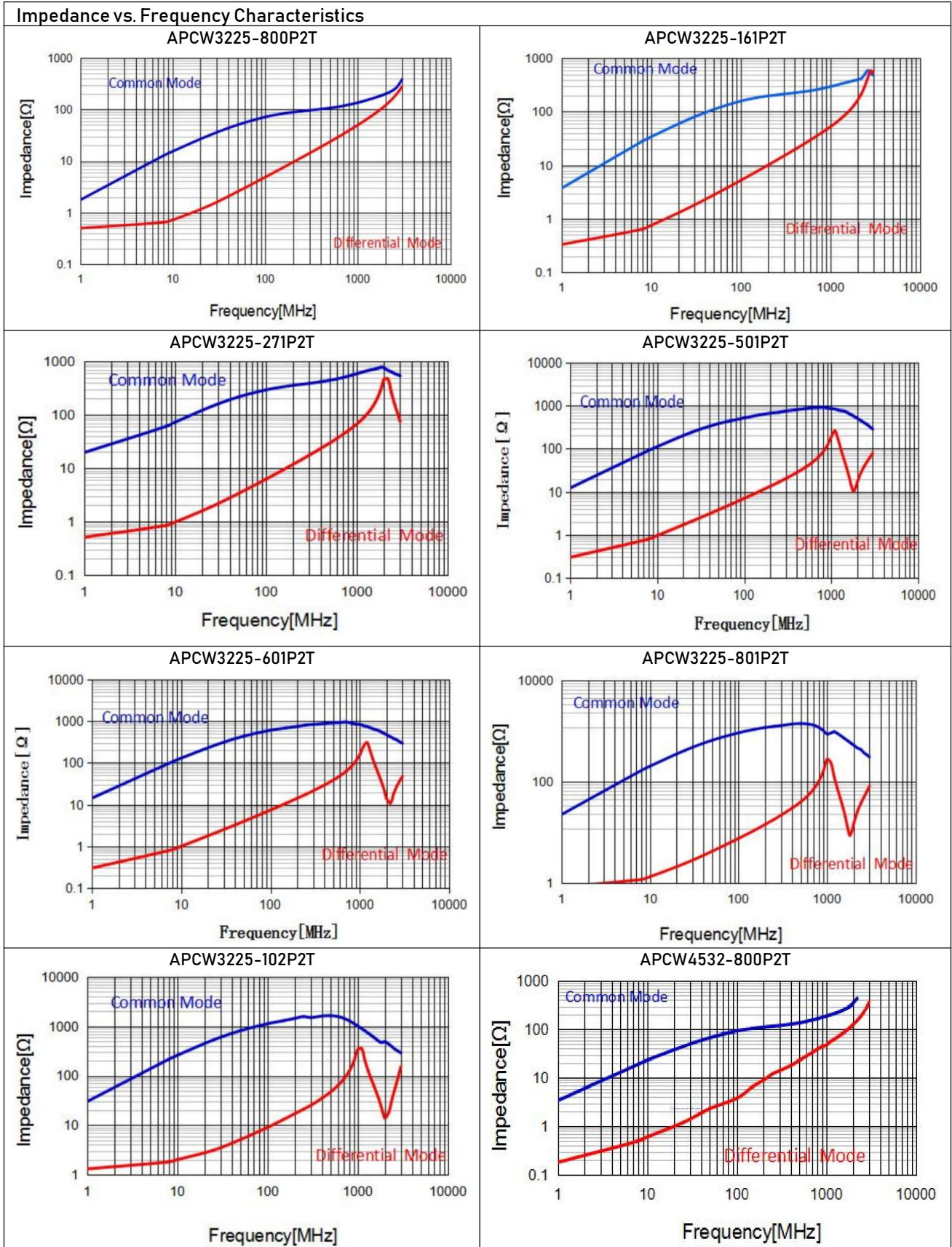
TYPICAL ELECTRICAL CHARACTERISTICS



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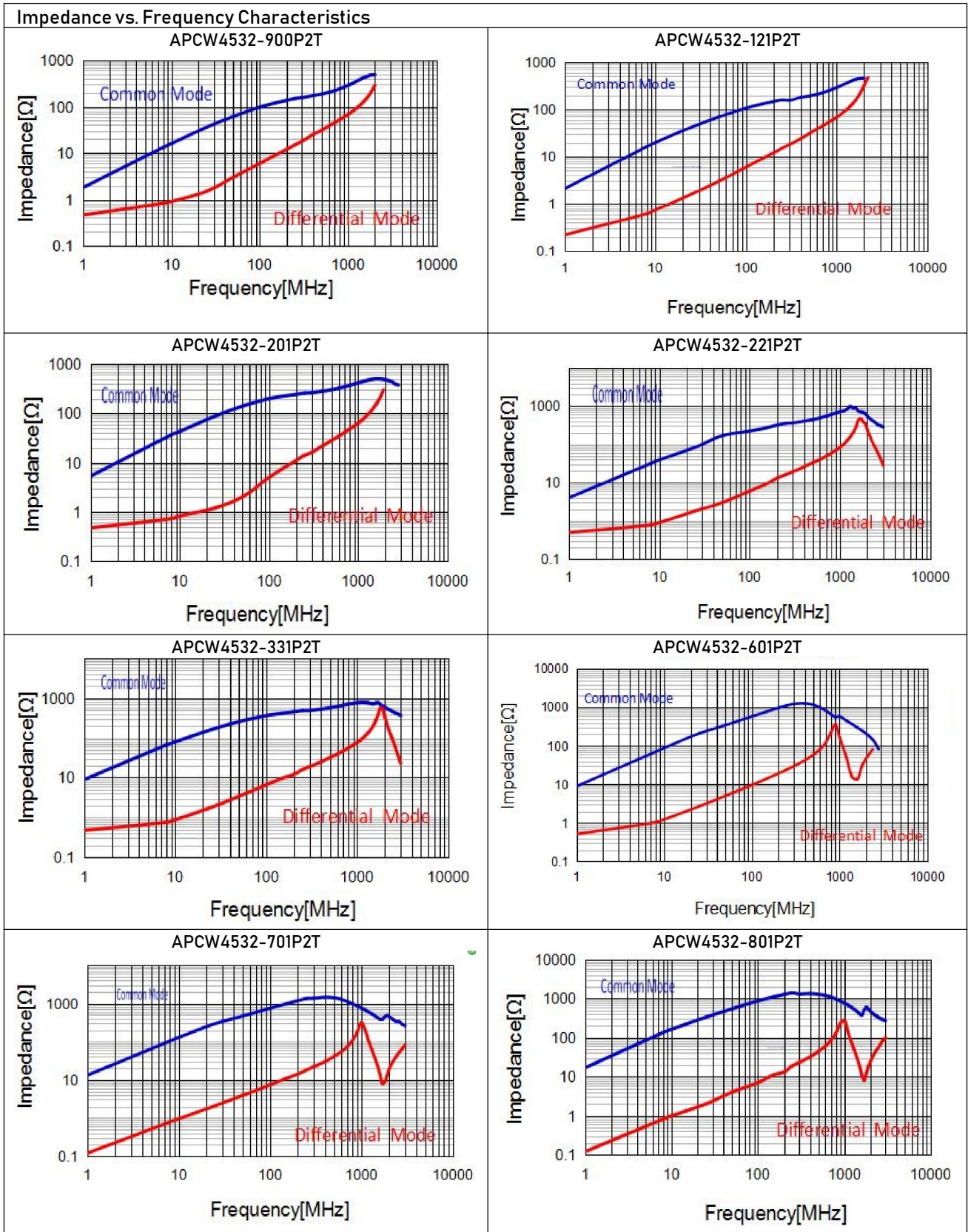


TYPICAL ELECTRICAL CHARACTERISTICS

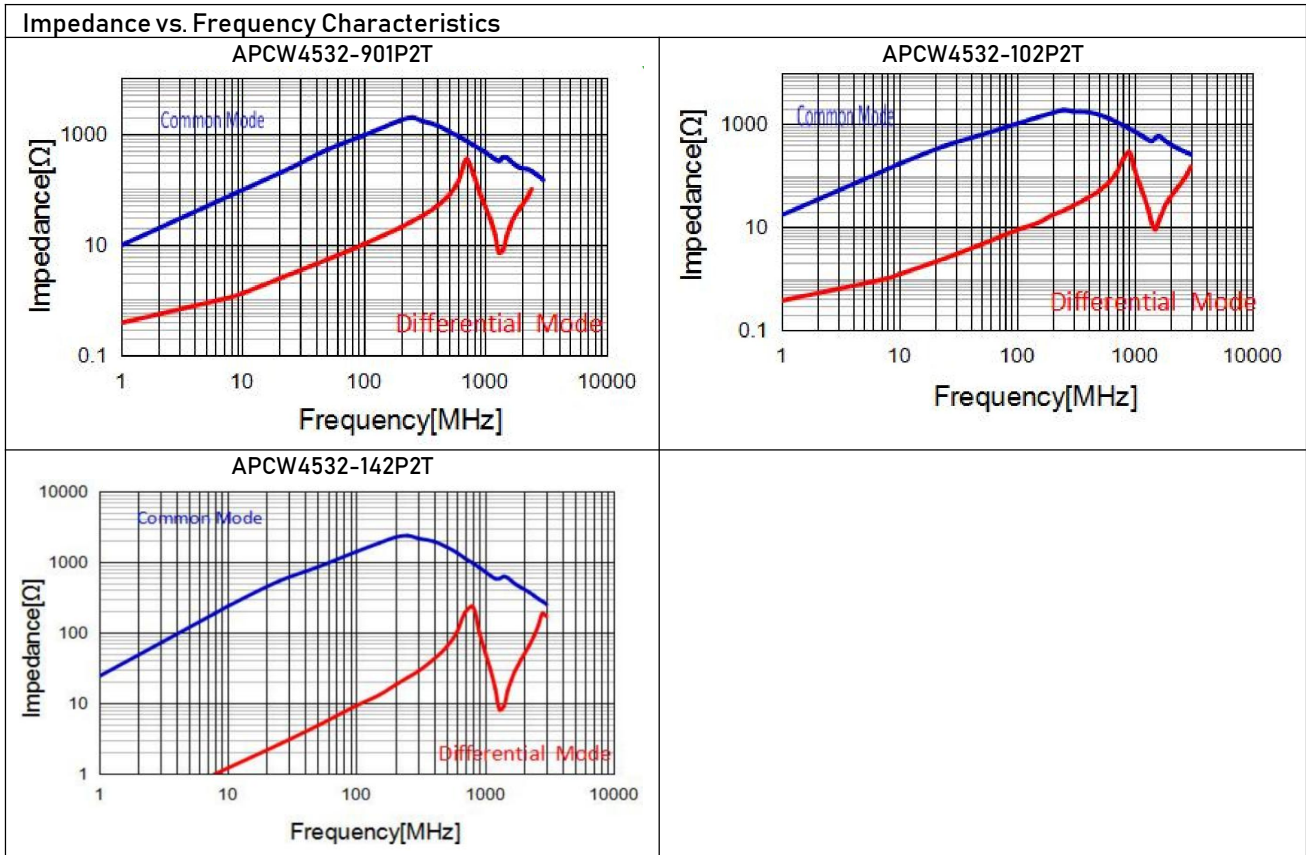




TYPICAL ELECTRICAL CHARACTERISTICS



TYPICAL ELECTRICAL CHARACTERISTICS



Note:

This series product is not applies in automotive or related products. Otherwise, we will shall not bear than the resulting all the problems of quality and responsibility.

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