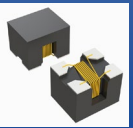


Signal Common Mode Chokes



ACMS-1210U4

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1.2 x 1.0 x 0.9 mm
RoHS/RoHS II Compliant
 MSL Level = 1

Features

- High impedance over high frequency
- Rated current up to 400 mA
- 50Vdc rated voltage
- Compact low-profile package options
- Operating temperature range: -40°C to +125°C

Applications

- Noise suppression in signal transmission line
- DisplayPort 2.1, HDMI 2.1, USB 3.2™, USB4™, and Thunderbolt™ interfaces
- Laptops & portable gaming devices
- Monitors, active cables, docking stations and storage devices

Electrical Specifications

Part Number*	Common Mode Impedance (Ω)@100MHz	Impedance Tolerance	Cut-off Frequency (GHz)	DCR (Ω)	Rated Current (mA)	Rated Voltage (VDC)	Withstand Voltage (VDC)	Insulation Resistance (MΩ)
	Typ.	%	Typ.	Max.	Max.	Max.	Max.	Min.
ACMS-1210U4-1R9	1.9	25	18	0.20	400	50	125	10
ACMS-1210U4-5R3	5.3	25	18	0.30	300	50	125	10
ACMS-1210U4-300	30.0	25	18	0.20	400	50	125	10
ACMS-1210U4-900	90.0	25	18	0.30	300	50	125	10

*For full orderable part number, please refer to the [Part Identification](#) section.

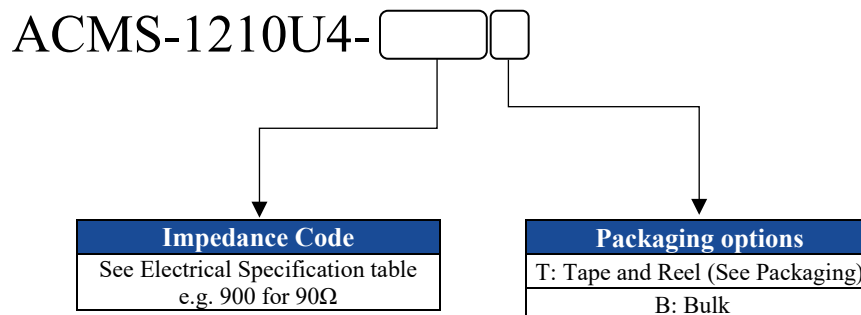
Rated Current is based on an Irms temperature rise of 40°C Max.

Operating temperature: -40°C to +125°C. (including self-temperature rise)

Storage temperature (in original packaging): -10°C to 40°C, <60% RH Max.

ACMS-1210U4 Series is RoHS Compliant and Pb free.

Part Identification

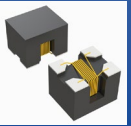


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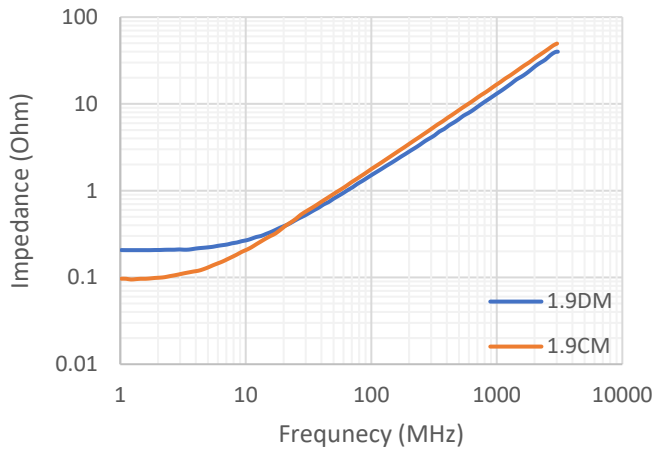
Check Inventory



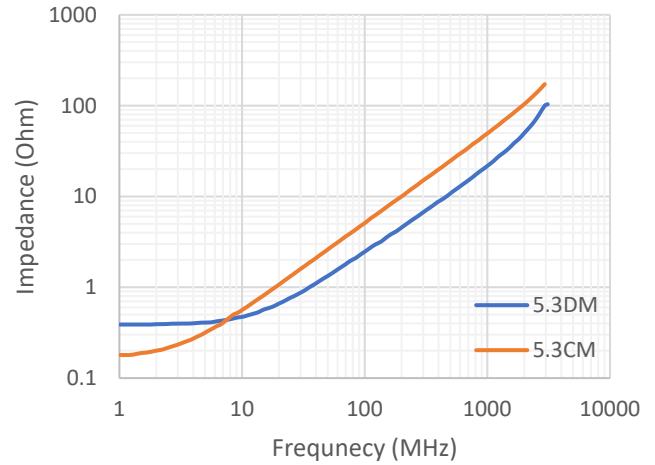
1.2 x 1.0 x 0.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Performance Graphs

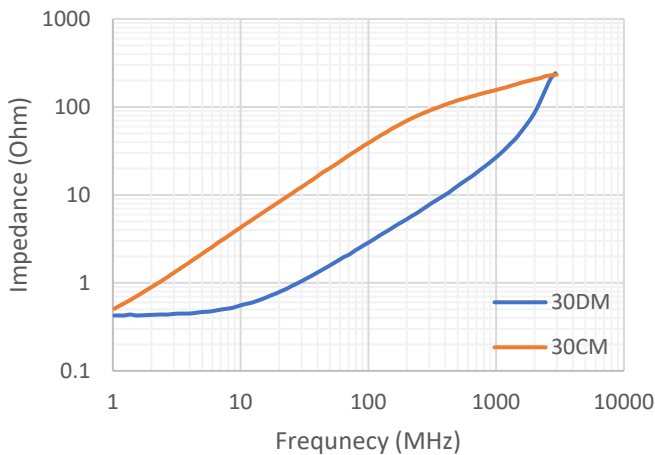
ACMS-1210U4-1R9 Differential & Common Mode



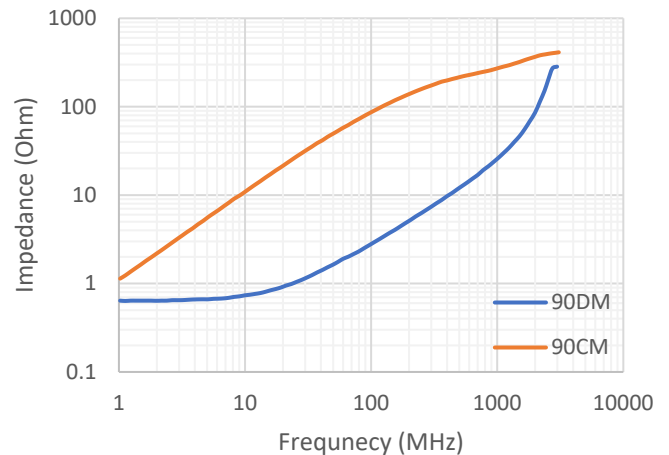
ACMS-1210U4-5R3 Differential & Common Mode



ACMS-1210U4-300 Differential & Common Mode



ACMS-1210U4-900 Differential & Common Mode

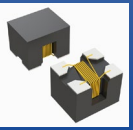


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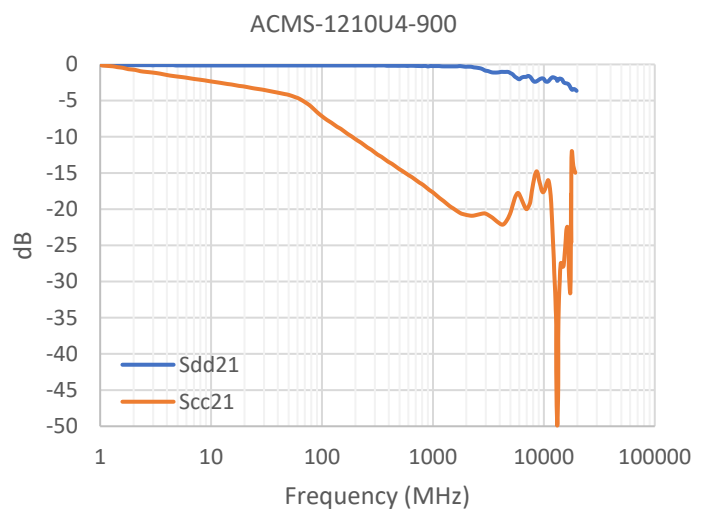
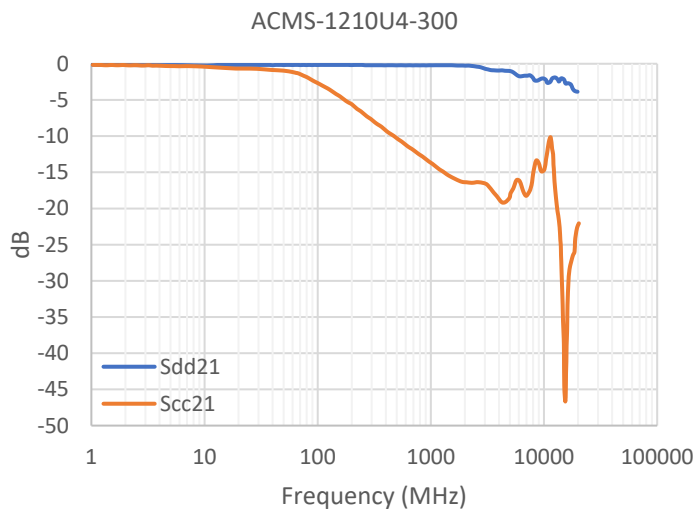
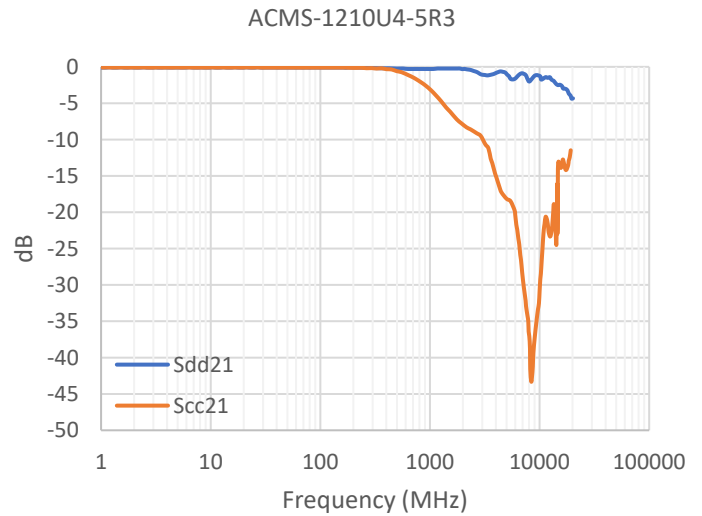
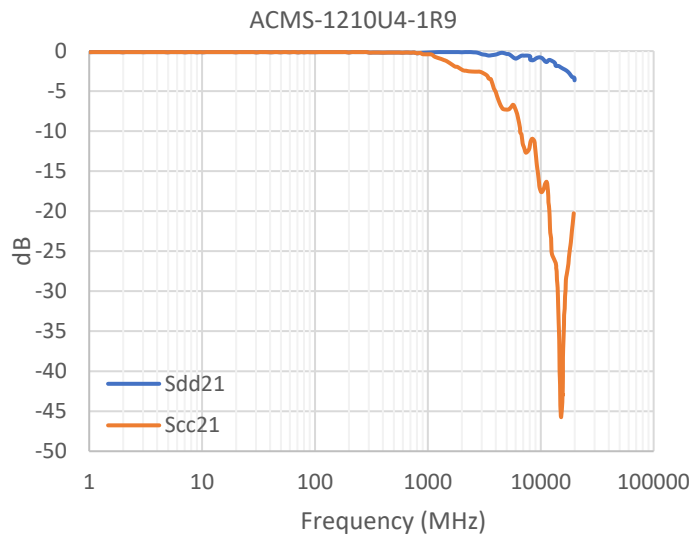


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1.2 x 1.0 x 0.9 mm
RoHS/RoHS II Compliant
MSL Level = 1

Performance Graphs

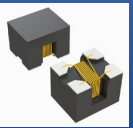


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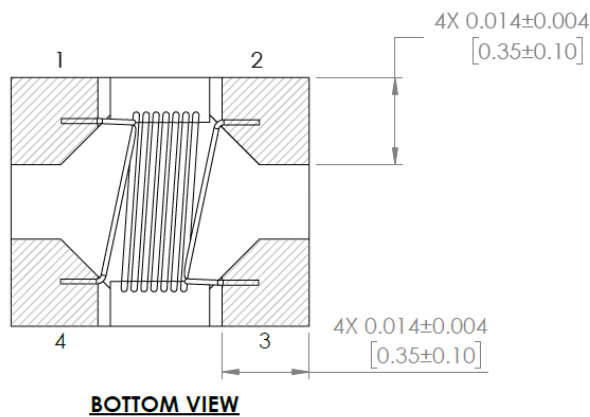
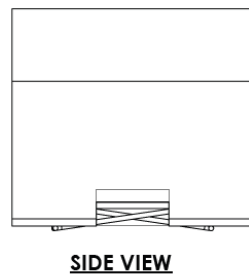
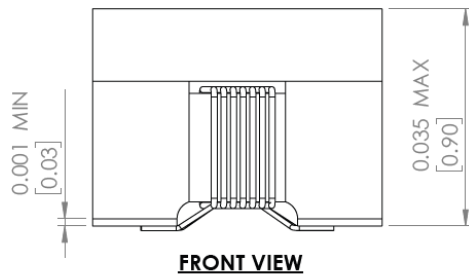
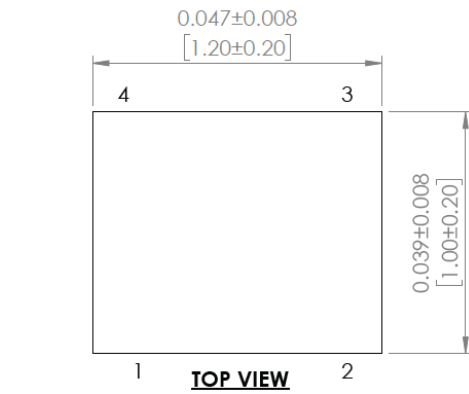


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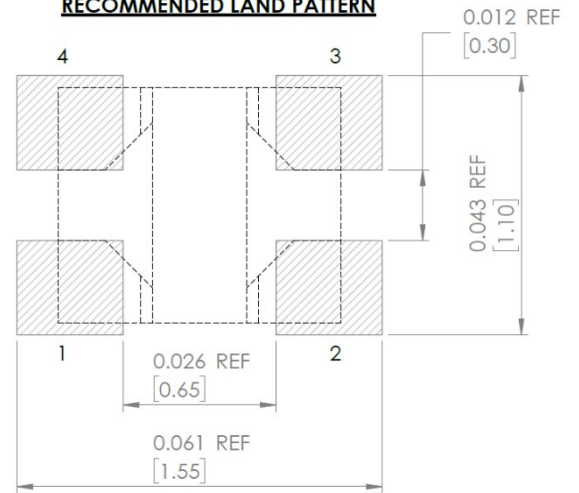


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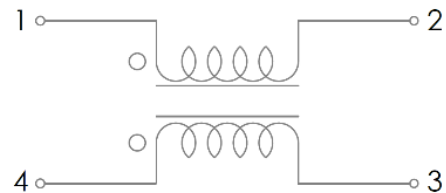
Mechanical Specifications



RECOMMENDED LAND PATTERN



SCHEMATIC



DIMENSIONS: INCHES [mm]

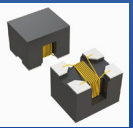


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MSL Level = 1

Reflow Profile

Reflow standard: [JEDEC J-STD-020]

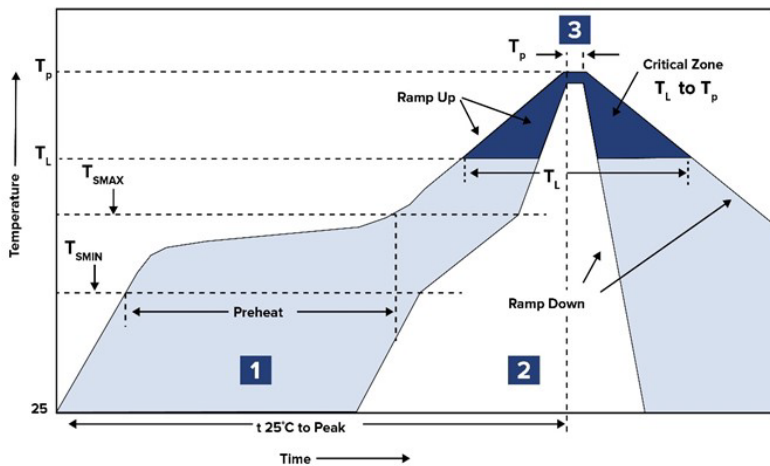


Table 1

SnPb Eutectic Process Classification Temperatures (T_c)		
Package Thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5 mm	235 °C	220 °C
≥2.5 mm	220 °C	220 °C

Table 2

Pb-Free Process Classification Temperatures (T_c)			
Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 mm - 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T_{smin})	100°C	150°C
Temperature maximum (T_{smax})	150°C	200°C
Time (T_{smin} to T_{smax}) (t_s)	60 - 120 sec.	60 - 120 sec.
Average ramp-up rate (T_{smax} to T_P)	3°C/sec. max	3°C/sec. max
Liquidous temperature (T_L)	183°C	217°C
Time at liquidous (t_L)	60 - 150 sec.	60 - 150 sec.
Peak package body temperature (T_P)*	See Table 1	See Table 2
Time (t_p)** within 5°C of the specified classification temperature (T_c)	20 sec.	30 sec.
Ramp-down rate (T_P to T_{smax})	6°C/sec. max	6°C/sec. max
Time 25°C to peak temperature	6 min. max	8 min. max
Reflow cycles	2 max	2 max

*Tolerance for peak profile temperature (T_P) is defined as a supplier minimum and a user maximum.

**Tolerance for time at peak profile temperature (t_p) is defined as supplier minimum and a user maximum.

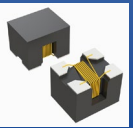


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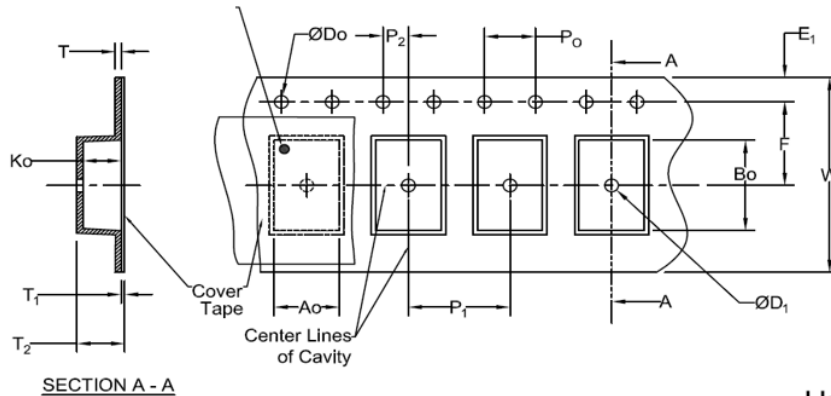
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MSL Level = 1

Packaging

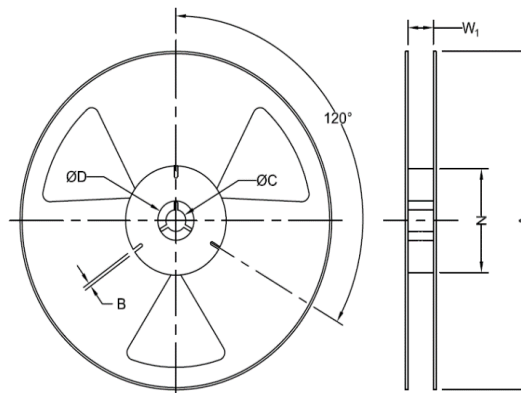
Tape & Reel: 3000 pcs/reel



Unit: mm

Tape Specifications (mm)

Width	Ao	Bo	Do	D ₁ (Min)	E ₁	F	Ko
		1.12±0.1	1.40±0.1	1.5+0.1/-0.0	*	1.75±0.1	3.5±0.05
8mm	P ₁	P ₂	P ₀	T (Max)	T ₁ (Max)	T ₂ (Max)	W (Max)
	4.0±0.1	2.0±0.05	4.0±0.1	0.22±0.1	*	*	8.1



Unit: mm

Reel Specifications (mm)

Width	Qty/Reel	A (Ref)	B (Min)	C (Min)	D (Min)	N (Ref)	*W ₁ (Ref)
8mm	3000	178	1.5	13.0+0.5/-0.2	20.2	60.0	9.0

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf (COTS), which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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