

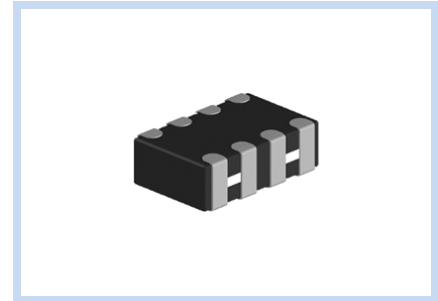
Common Mode Filter Array 4 Line 67~220 Ω 300~400mA

SIC6-CAI Series

MERITEK

FEATURE

- Operating Temperature: -40°C ~ +85°C
- Small chip common mode filter with composite co-fired material
- Two identical common mode chokes in a small chip size
- Solve EMI problem for high speed differential signal transmission line
- Applications: USB, LVDS



PART NUMBERING SYSTEM

SIC 6 4 67RN A4 CAI
(1) (2) (3) (4) (5) (6)

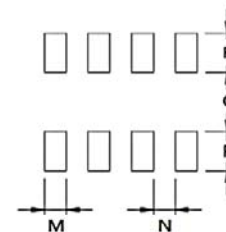
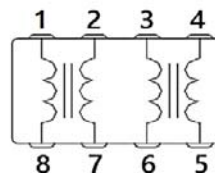
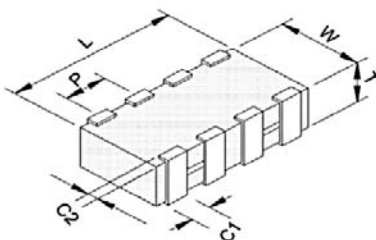


No	Item	Code	Description	Series Reference
(1)	Meritek Series	SIC	Common Mode Filter Array series	4 Line Chip Type
(2)	Dimension Code	6	06: 3.20x1.60mm	WidthxLength
(3)	Line	4	4: 4 Lines	Number of Lines
(4)	Impedance/Tolerance	67RN	67RN: 67 Ω ±25%	67~220 Ω ±25%
(5)	Rated Current	A4	A4: 400mA	300~400mA
(6)	Internal Code	CAI	Internal Control Code	Internal or Project Reference

ELECTRICAL CHARACTERISTICS

Part Number	Impedance @100MHz (Ω)	Max DC Resistance (Ω)	Max Rated Current (mA)	Rated Voltage (V)	Withstand Voltage (V)	Insulation Resistance (MΩ) Min.
SIC6467RNA4CAI	67±25%	0.40	400	10	25	200
SIC6490RNA4CAI	90±25%	0.40	400	10	25	200
SIC64121NA3CAI	120±25%	0.40	300	10	25	200
SIC64181NA3CAI	180±25%	0.50	300	10	25	200
SIC64221NA3CAI	220±25%	0.50	300	10	25	200

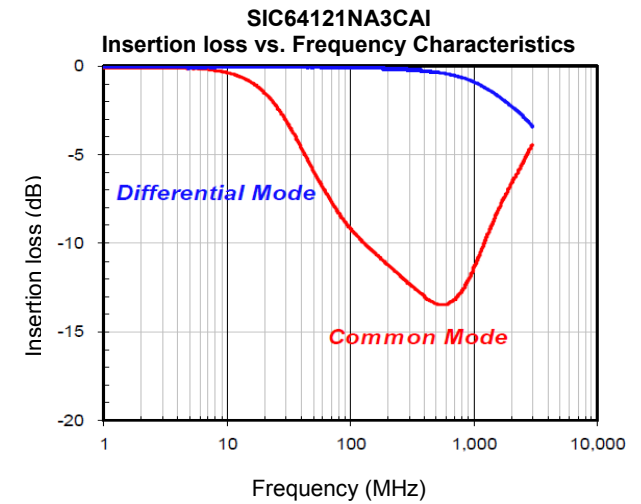
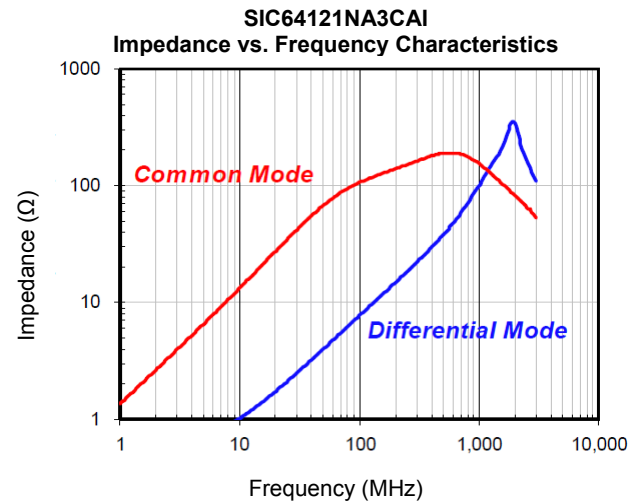
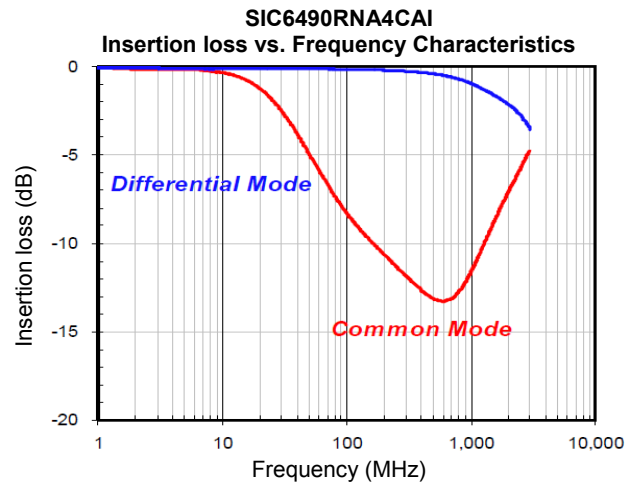
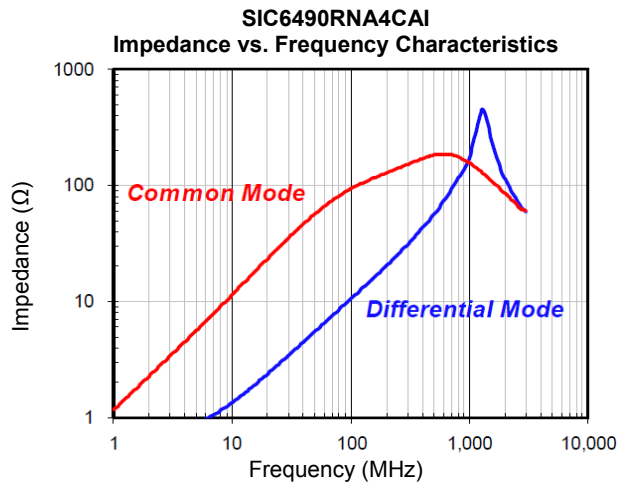
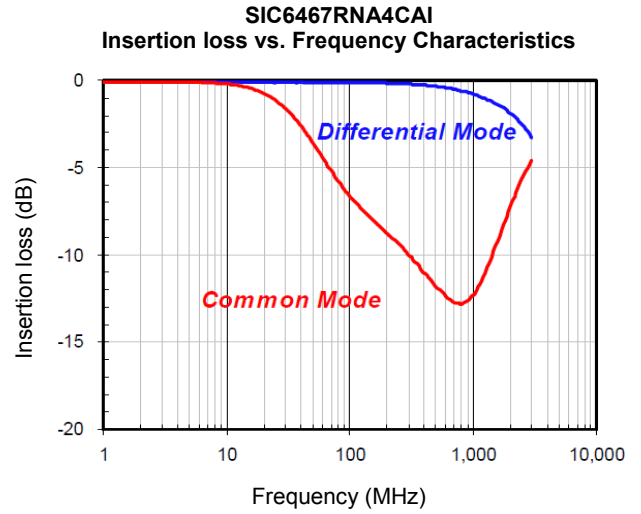
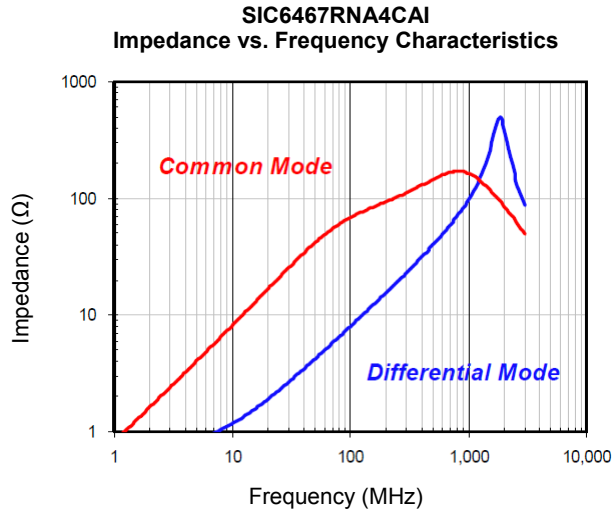
DIMENSIONS AND PCD LAND LAYOUT



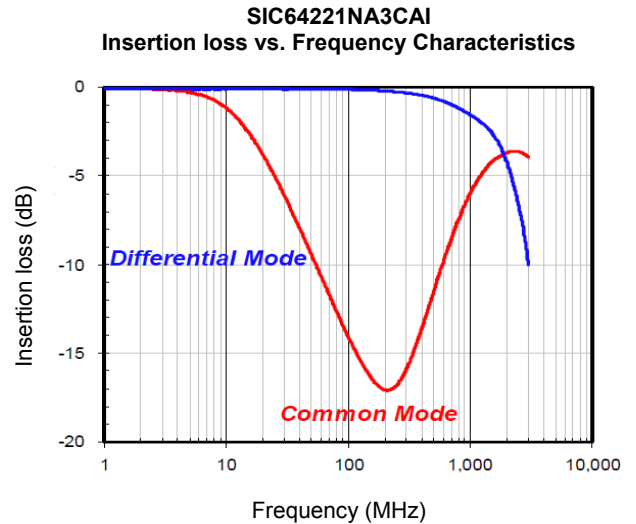
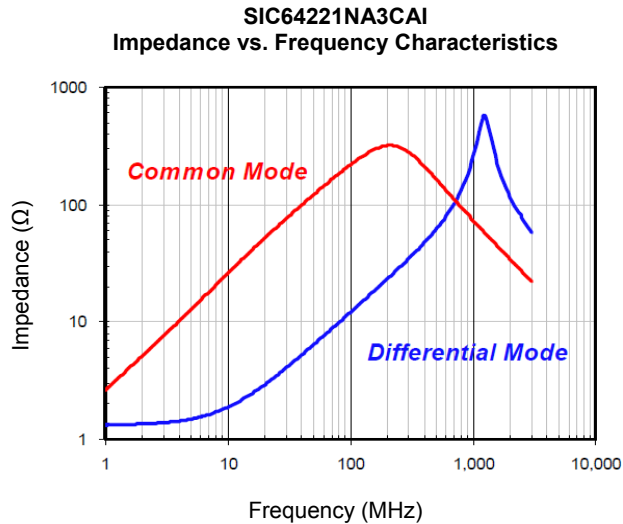
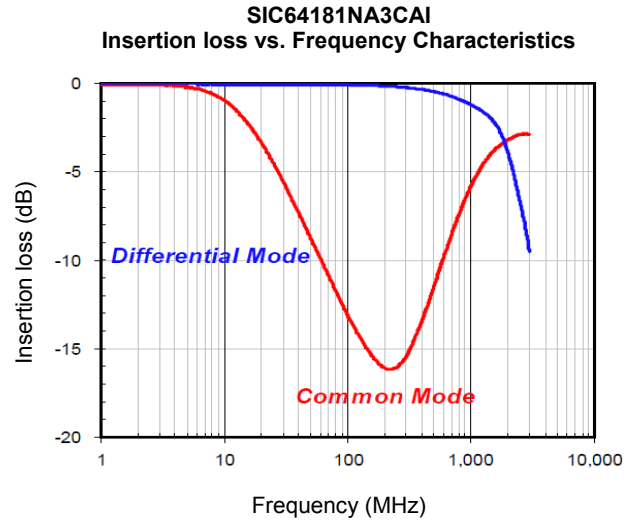
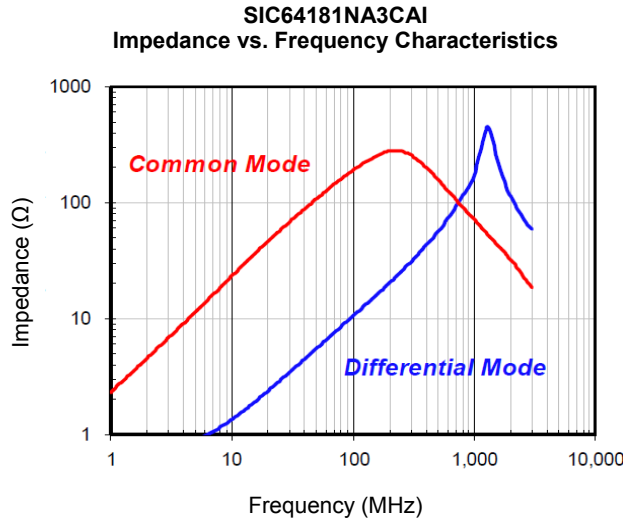
Series	L	W	T	P	C1	C2	M	N	Q	R
SIC6-CAI	±0.20	±0.20	±0.10	±0.10	±0.15	±0.20	0.40	0.40	0.60	1.00

Unit: mm

CHARACTERISTIC CURVES



CHARACTERISTIC CURVES



RELIABILITY TEST CONDITION AND REQUIREMENT

Test	Test Condition	Requirement
Temperature Cycle	Temperature: -40~+85°C, Cycle: 100 cycles Dwell time: 30 minutes, Measurement: at ambient temperature 24 hrs after test completion	No mechanical damage Impedance value should be within ±20% of the initial value
Operational Life	Temperature: 85±5°C, Test time: 1000 hrs Apply current: full rated current, Measurement: at ambient temperature 24 hrs after test completion	No mechanical damage Impedance value should be within ±20% of the initial value
Biased Humidity	Temperature: 40±2°C, Humidity: 90~95% RH Test time: 1000 hrs, Apply current: full rated current Measurement: at ambient temperature 24 hrs after test completion	No mechanical damage Impedance value should be within ±20% of the initial value
Resistance to Soldering Heat	Solder temperature: 260±5°C Flux: Rosin DIP time: 10±1 sec	More than 95% of terminal electrode should be covered with new solder No mechanical damage Impedance value should be within ±20% of the initial value

Common Mode Filter Array

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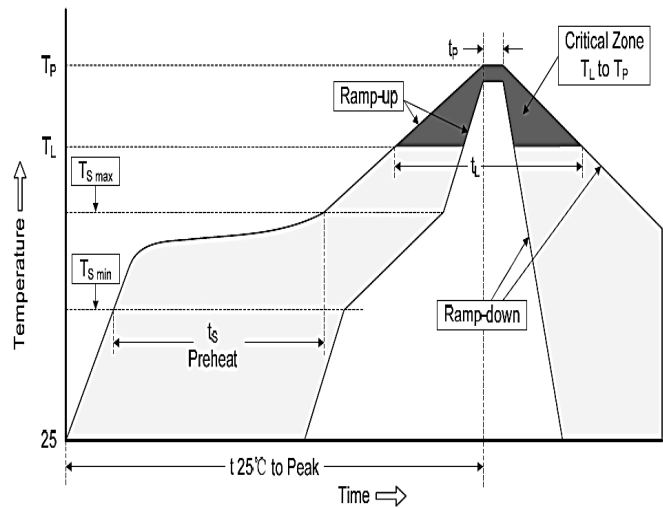
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RELIABILITY TEST CONDITION AND REQUIREMENT

Test	Test Condition	Requirement
Steam Aging Test	Temperature: 93±2°C, Test time: 4 hrs Solder temperature: 235±5°C Flux: Rosin, DIP time: 5±1 sec	More than 95% of terminal electrode should be covered with new solder

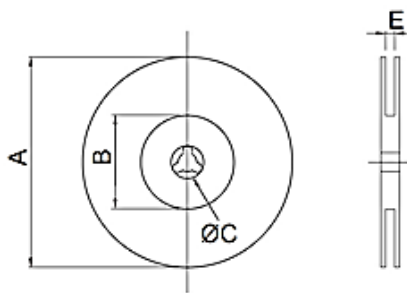
RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min $T_{s(min)}$	150°C
	Temp. Max $T_{s(max)}$	200°C
	Time (min. to max.) (t_s)	60~120 seconds
Average ramp up rate (T_L) to peak		3°C/second Max.
$T_{s(max)}$ to T_L (Ramp-up rate)		3°C/second Max.
Reflow	Temp. (T_L)	217°C Min.
	Time (min. to max.) (t_L)	60~150 seconds
Peak Temperature (T_P)		255~260°C
Time within 5°C of actual peak Temperature (t_p)		≥30 seconds
Ramp-down Rate		5°C/second Max.
Time (25°C to Peak Temp.)		6 mins Max.

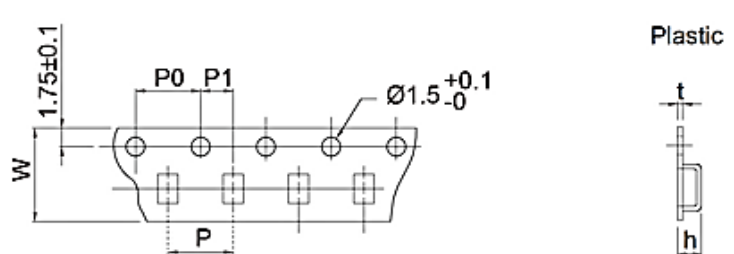


PACKAGING SPECIFICATION

CARRIER TAPE REELS



TAPE DIMENSION (mm)



Series	Reel Dimension (mm)				Tape Dimensions (mm)						Parts Per Reel
	A	B	C	E	W	P	P0	P1	t	h	
SIC5-CAI	±1.0	±0.5	±0.2	±0.5	±0.10	±0.10	±0.10	±0.05	±0.05	±0.10	3,000
SIC6-CAI	178.0	60.0	13.0	9.0	8.00	4.00	4.00	2.00	0.22	1.25	3,000

*Specifications subject to change without notice.