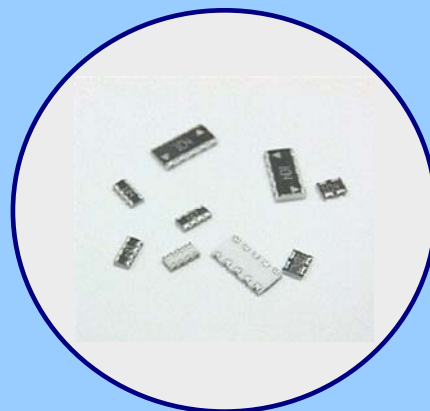
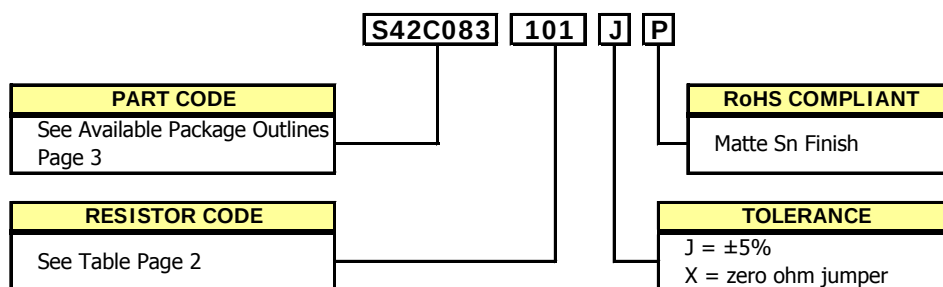


FEATURES

- **Anti-Sulfur Design Structure**
- **Suitable for Applications in Harsh Environments**
- **High Density Packaging**
 - Up to 30% less space per resistor than 0603 chip resistors
 - Up to 75% less space per resistor than 0805 chip resistors
- **Low Profile Leadless Surface Mount Construction**
- **Concave or Convex Terminations**
- **Isolated and Bussed Circuits**
- **Resistor Arrays Require Fewer Placements Than Discrete Components**
- **Tape and Reel Packaging, EIA-418**
- **RoHS Compliant in Accordance with EU Directive 2011/65/EU**
 - Lead-Free Termination Finish
 - Exemption 7(c)-I, Electrical and electronic components containing lead [Pb] in glass



ORDERING INFORMATION



3 Digit Resistor Code

1st and 2nd Digit is the value. 3rd Digit is number of zeros.

ex. 102 = 1000 Ohm = 1k Ohm

ex. 683 = 68000 Ohm = 68k Ohm

For Resistance Value <100 ohm

"R" indicates decimal on values less than 100 Ohms.

ex. 49R9 = 49.9 Ohm

**Not all performance combinations and resistor values may be available.
Contact your local CTS Representative or CTS Customer Service for availability.**

Part Number Examples

Resistor Value	Tolerance [J = ±5%]
10 Ohm	S42C083100JP
49.9 Ohm	Not Available
120 Ohm	S42C083121JP
1k Ohm	S42C083102JP
68k Ohm	S42C083683JP

ORDERING INFORMATION
AVAILABLE RESISTOR VALUES & EIA CODES

Ohms	Code	Ohms	Code	Ohms	Code	Ohms	Code	Ohms	Code	Ohms	Code
0	000X	68	680	510	511	3.9K	392	30.0K	303	220K	224
10	100	75	750	560	561	4.3K	432	33.0K	333	240K	244
11	110	82	820	620	621	4.7K	472	36.0K	363	270K	274
12	120	91	910	680	681	5.1K	512	39.0K	393	300K	304
13	130	100	101	750	751	5.6K	562	43.0K	433	330K	334
15	150	110	111	820	821	6.2K	622	47.0K	473	360K	364
16	160	120	121	910	911	6.8K	682	51.0K	513	390K	394
18	180	130	131	1.0K	102	7.5K	752	56.0K	563	430K	434
20	200	150	151	1.1K	112	8.2K	822	62.0K	623	470K	474
22	220	160	161	1.2K	122	9.1K	912	68.0K	683	510K	514
24	240	180	181	1.3K	132	10.0K	103	75.0K	753	560K	564
27	270	200	201	1.5K	152	11.0K	113	82.0K	823	620K	624
30	300	220	221	1.6K	162	12.K	123	91.0K	913	680K	684
33	330	240	241	1.8K	182	13.K	133	100K	104	750K	754
36	360	270	271	2.0K	202	15.0K	153	110K	114	820K	824
39	390	300	301	2.2K	222	16.0K	163	120K	124	910K	914
43	430	330	331	2.4K	242	18.0K	183	130K	134	1M	105
47	470	360	361	2.7K	272	20.0K	203	150K	154		
51	510	390	391	3.0K	302	22.0K	223	160K	164		
56	560	430	431	3.3K	332	24.0K	243	180K	184		
62	620	470	471	3.6K	362	27.0K	273	200K	204		

TAPE & REEL INFORMATION

Reel Diameter 7"	S41X043 S41C083 S41X083	S42C043 S42C083 S42X083	S42C163
Parts Per Reel	10,000	5,000	4,000
Pitch	2mm	4mm	4mm
Carrier Width	8mm	8mm	12mm
Material	Paper	Paper	Plastic

ELECTRICAL & ENVIRONMENTAL CHARACTERISTICS

Series	PCB Area [in ²] Per Resistor	Circuit Type	Resistance Range [Ohms]	70°C Power Per Resistor *	Maximum Operating Voltage
S41	0.0015	Isolated	10 - 1M	.063W	25V
S42	0.0037	Isolated	10 - 1M	.063W	50V

* Total Rated Package Power equals total number of resistors times rated Power per Resistor

Resistance Tolerance: standard $\pm 5\%$ or 0.5 Ω [whichever is greater].

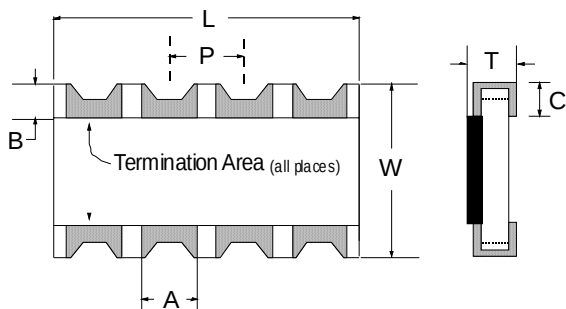
Operating Temperature Range: -55°C to +125°C.

Temperature Coefficient: standard 200 ppm/°C.

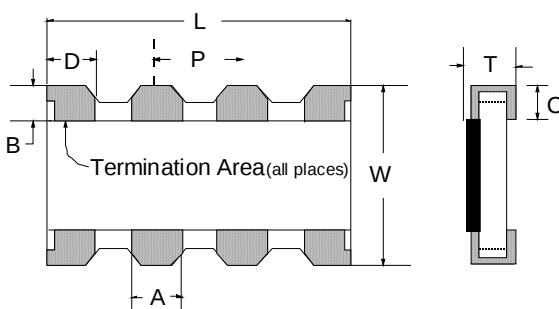
Test	Maximum Delta R		Test Description
	S41	S42	
Thermal Cycle	1.00%	1.00%	5 Cycles -55°C to +125°C
Short Time Overload	2.50%	1.00%	2½ Times Rated Working Voltage for 5 Seconds
Moisture Resistance	5.00%	2.00%	240 Hours 10% rated load, -10°C to +65°C, 90% R.H.
High Temperature Exposure	1.00%	1.00%	1000 Hours, no load, +125°C
Load Life	5.00%	2.00%	1000 Hours @ +70°C, rated load
Resistance to Solder Heat	2.50%	1.00%	10 Seconds @ +260°C solder
Resistance to Solvents			Isopropyl alcohol, Freon TMC
Solderability			RMA Flux, +230°C, 5 Seconds dip, 95% coverage

PACKAGE OUTLINES

CONCAVE TERMINATION – TYPE C



CONVEX TERMINATION – TYPE X

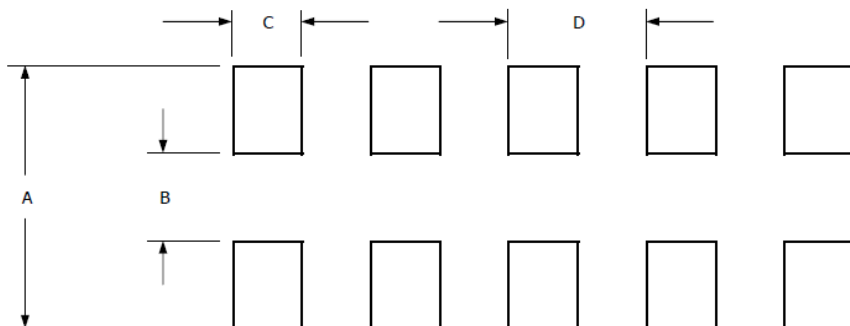


NOTES

1. Termination pads (e3). Barrier plating is nickel [Ni] with Matte tin [Sn] finish.
2. Reflow conditions per JEDEC-J-STD-020, +260°C maximum.

DIMENSIONS [mm/inch]												
Part Code	Configuration	# Pads	# Res.	Circuit	L	W	P [Typ.]	T	A	B	C	D
S41X043	0402 X 2	4	2	Isolated	1.00 ±0.20 0.039 ±0.008	1.00 ±0.20 0.039 ±0.008	0.65 0.026	0.35 ±0.10 0.014 ±0.004	0.295 ±0.135 0.012 ±0.005	0.20 ±0.15 0.008 ±0.006	0.25 ±0.10 0.010 ±0.004	0.33 ±0.15 0.013 ±0.006
S41X083	0402 X 4	8	4	Isolated	2.00 ±0.20 0.079 ±0.008		0.50 0.020	0.40 ±0.15 0.016 ±0.006	0.30 ±0.15 0.012 ±0.006		0.25 ±0.20 0.010 ±0.008	0.40 ±0.15 0.016 ±0.006
S41C083	0402 X 4	8	4	Isolated				0.375 ±0.125 0.015 ±0.005	0.29 ±0.11 0.011 ±0.004	0.20 ±0.10 0.008 ±0.004	0.265 ±0.115 0.011 ±0.005	N/A
S42C043	0603 X 2	4	2	Isolated	1.60 ±0.20 0.063 ±0.008	1.60 ±0.20 0.063 ±0.008	0.80 0.032	0.525 ±0.175 0.021 ±0.007	0.50 ±0.15 0.020 ±0.006	0.30 ±0.20 0.012 ±0.008	0.40 ±0.15 0.016 ±0.006	N/A
S42X083	0603 X 4	8	4	Isolated	3.20 ±0.20 0.126 ±0.008			0.55 ±0.15 0.022 ±0.006	0.45 ±0.20 0.018 ±0.008		0.275 ±0.175 0.011 ±0.007	0.525 ±0.225 0.021 ±0.009
S42C083											0.35 ±0.20 0.014 ±0.008	N/A
S42C163	0603 X 8	16	8	Isolated	6.40 ±0.20 0.252 ±0.008			0.525 ±0.175 0.021 ±0.007	0.50 ±0.15 0.020 ±0.006		0.40 ±0.15 0.016 ±0.006	N/A

RECOMMENDED LAND PATTERNS



SERIES	DIMENSIONS [mm/in]			
	A	B	C	D
S41X043	1.800	0.500	0.400	0.670
	0.071	0.020	0.016	0.026
S41X083	1.800	0.500	0.300	0.500
	0.071	0.020	0.012	0.020
S41C083	1.800	0.500	0.300	0.500
	0.071	0.020	0.012	0.020
S41X163	1.800	0.500	0.300	0.500
	0.071	0.020	0.012	0.020
S42	2.600	0.800	0.450	0.800
	0.102	0.031	0.018	0.031

CIRCUIT TYPES

