



Figure 1. Dimensions



Figure 2A.



Figure 2B.



Figure 2C.



Figure 2D.

**DESCRIPTION**

By its name, this 128-Bin Resistor Kits use our patented Super Enclosure which has 128 individually lidded and labeled bins for storing up to 128 different types of SMD resistors. Figure 1 shows the Super Enclosure dimensions. Figure 2's shows the photos of the Super Enclosure. Table 3 is the selection guide for different type of kits available in this series and their online purchasing links. The kits are categorized by the size of the resistors, the number of values/kit, and the number of pieces/value. Table 1 shows the specifications of the resistors. Please note that for the differential resistor kit, it covers all the E-96 series resistance values, but implemented by 1% resistors, as opposed to  $\pm 5\%$  resistors. For example, our selected resistor value is  $2.49\Omega$ , while the original E-96 value is  $2.4\Omega$ . It has different amount of resistors for different values: 50 PCs per value for rarely used values and 300

PCs per value for commonly used values, thus, the kits have a long usage time while not wasting components for rarely used resistors.

Operating the enclosure is easy and convenient so that your time for obtaining a particular resistor is minimized to just seconds.

The kits can easily be placed on a work bench, put on a shelf, or transported to other sites, and are the best choice for building prototypes, doing experiments on new circuits, or reworking printed circuit boards.

For more detailed information:

[www.analogtechnologies.com](http://www.analogtechnologies.com)

[www.smtzone.com](http://www.smtzone.com)

E-mail us: [staff@analogti.com](mailto:staff@analogti.com)

**The Differential Resistor Kits can be stored easily on a bench shelf as shown in Figure 7 below.**



Figure 3. Putting the Differential Resistor Kits on a Shelf



**SPECIFICATIONS**

Table 1. Characteristics

Type	Power	Operating Temperature Range	Max. Working Voltage	Max. Overload Voltage	Dielectric Withstanding Voltage	Resistance Range	Tolerance	Temperature Coefficient	Jumper Criteria	
									Rated Current	Max. Current
0402	1/16W	-55°C to 155°C	50V	100V	100V	1Ω to 10MΩ 0Ω Jumper < 0.05 Ω	1%	1Ω ≤ R ≤ 10Ω ±200ppm°C 10Ω < R ≤ 10MΩ ±100ppm°C 10MΩ < R ≤ 22MΩ ±200ppm°C	1.0A	2.0A
0603	1/10W	-55°C to 155°C	75V	150V	100V	1Ω to 10MΩ 0Ω Jumper < 0.05 Ω	1%	1Ω ≤ R ≤ 10Ω ±200ppm°C 10Ω < R ≤ 10MΩ ±100ppm°C 10MΩ < R ≤ 22MΩ ±200ppm°C	1.0A	2.0A
0805	1/8W	-55°C to 155°C	150V	300V	300V	1Ω to 10MΩ 0Ω Jumper < 0.05 Ω	1%	1Ω ≤ R ≤ 10Ω ±200ppm°C 10Ω < R ≤ 10MΩ ±100ppm°C 10MΩ < R ≤ 22MΩ ±200ppm°C	2.0A	5.0A

Table 2. For outlines, please refer to Figure 3.

Type	L	W	H	I <sub>1</sub>	I <sub>2</sub>	Unit
0402	0.039 ± 0.002	0.020 ± 0.002	0.013 ± 0.002	0.008 ± 0.004	0.010 ± 0.004	inch
	1.00 ± 0.05	0.50 ± 0.05	0.32 ± 0.05	0.20 ± 0.10	0.25 ± 0.10	mm
0603	0.063 ± 0.004	0.031 ± 0.004	0.018 ± 0.004	0.010 ± 0.006	0.010 ± 0.006	inch
	1.60 ± 0.10	0.80 ± 0.10	0.45 ± 0.10	0.25 ± 0.15	0.25 ± 0.15	mm
0805	0.079 ± 0.004	0.049 ± 0.004	0.020 ± 0.004	0.014 ± 0.008	0.014 ± 0.008	inch
	2.00 ± 0.10	1.25 ± 0.10	0.50 ± 0.10	0.35 ± 0.20	0.35 ± 0.20	mm
1206	0.122 ± 0.004	0.063 ± 0.004	0.022 ± 0.004	0.018 ± 0.008	0.018 ± 0.008	inch
	3.10 ± 0.10	1.60 ± 0.10	0.55 ± 0.10	0.45 ± 0.20	0.45 ± 0.20	mm

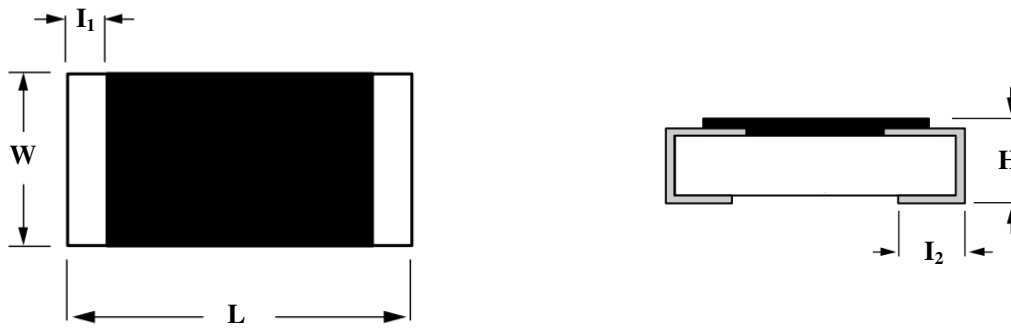


Figure 4. Resistor Dimensions

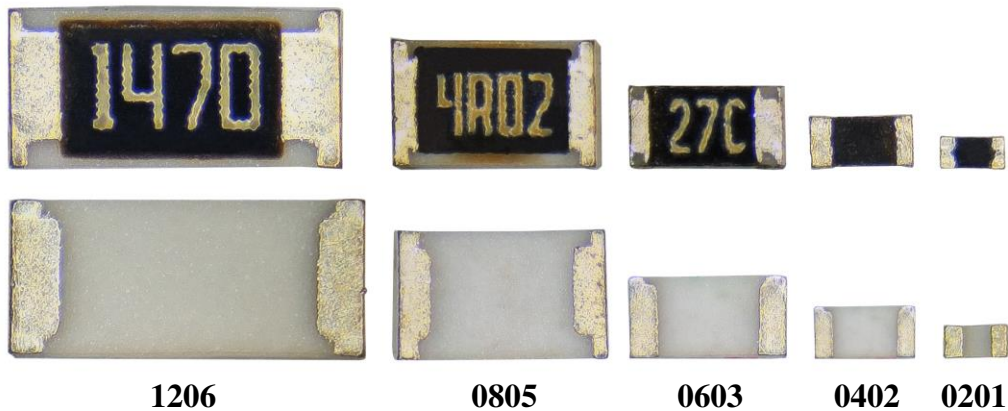


Figure 5. Resistor Marking Code

**AS**: [SMTZone.com](http://SMTZone.com), our own online store, no commission fee.

**SZ**: [shop.analogtechnologies.com](http://shop.analogtechnologies.com), our own online store, no commission fee.

Table 3. Selection Guide for different type of kits available.

Value \ Size	0402	0603	0805
510 Values	R04E96-50-300PCD	R06E96-50-300PCD	R09E96-50-300PCD
	50/300PCs/Value	50/300PCs/Value	50/300PCs/Value
	<b>AS</b> <b>SZ</b>	<b>AS</b> <b>SZ</b>	<b>AS</b> <b>SZ</b>



Table 4. Available Values for Differential Resistor Kits: 300PCs (in bold) and 50PCs.

Note: 1206 & 0805 use 4 digit marking. 0603 use 3 digit marking. 0402 & 0201 don't use marking. See Figure 5.

Table with 22 columns: Resistance, 4 Digit Marking, 3 Digit Marking. Rows list resistor values from 0.1 to 20.5, including 300PCs (bold) and 50PCs (normal).



Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking
			21.0	21R0	32X	210	2100	32A	2.10k	2101	32B	21.0k	2102	32C	210k	2103	32D			
			21.5	21R5	33X	215	2150	33A	2.15k	2151	33B	21.5k	2152	33C	215k	2153	33D			
			<b>22.1</b>	<b>22R1</b>	<b>34X</b>	<b>221</b>	<b>2210</b>	<b>34A</b>	<b>2.21k</b>	<b>2211</b>	<b>34B</b>	<b>22.1k</b>	<b>2212</b>	<b>34C</b>	<b>221k</b>	<b>2213</b>	<b>34D</b>			
			22.6	22R6	35X	226	2260	35A	2.26k	2261	35B	22.6k	2262	35C	226k	2263	35D			
			23.2	23R2	36X	232	2320	36A	2.32k	2321	36B	23.2k	2322	36C	232k	2323	36D			
			23.7	23R7	37X	237	2370	37A	2.37k	2371	37B	23.7k	2372	37C	237k	2373	37D			
			24.3	24R3	38X	243	2430	38A	2.43k	2431	38B	24.3k	2432	38C	243k	2433	38D			
		2.49	<b>24.9</b>	<b>24R9</b>	<b>39X</b>	<b>249</b>	<b>2490</b>	<b>39A</b>	<b>2.49k</b>	<b>2491</b>	<b>39B</b>	<b>24.9k</b>	<b>2492</b>	<b>39C</b>	<b>249k</b>	<b>2493</b>	<b>39D</b>	2.49M	2494	39E
			25.5	25R5	40X	255	2550	40A	2.55k	2551	40B	25.5k	2552	40C	255k	2553	40D			
			26.1	26R1	41X	261	2610	41A	2.61k	2611	41B	26.1k	2612	41C	261k	2613	41D			
			26.7	26R7	42X	267	2670	42A	2.67k	2671	42B	26.7k	2672	42C	267k	2673	42D			
			<b>27.4</b>	<b>27R4</b>	<b>43X</b>	<b>274</b>	<b>2740</b>	<b>43A</b>	<b>2.74k</b>	<b>2741</b>	<b>43B</b>	<b>27.4k</b>	<b>2742</b>	<b>43C</b>	<b>274k</b>	<b>2743</b>	<b>43D</b>			
			28.0	28R0	44X	280	2800	44A	2.80k	2801	44B	28.0k	2802	44C	280k	2803	44D			
			28.7	28R7	45X	287	2870	45A	2.87k	2871	45B	28.7k	2872	45C	287k	2873	45D			
			29.4	29R4	46X	294	2940	46A	2.94k	2941	46B	29.4k	2942	46C	294k	2943	46D			
		3.01	<b>30.1</b>	<b>30R1</b>	<b>47X</b>	<b>301</b>	<b>3010</b>	<b>47A</b>	<b>3.01k</b>	<b>3011</b>	<b>47B</b>	<b>30.1k</b>	<b>3012</b>	<b>47C</b>	<b>301k</b>	<b>3013</b>	<b>47D</b>	3.01M	3014	47E
			30.9	30R9	48X	309	3090	48A	3.09k	3091	48B	30.9k	3092	48C	309k	3093	48D			
			31.6	31R6	49X	316	3160	49A	3.16k	3161	49B	31.6k	3162	49C	316k	3163	49D			
			32.4	32R4	50X	324	3240	50A	3.24k	3241	50B	32.4k	3242	50C	324k	3243	50D			
			<b>33.2</b>	<b>33R2</b>	<b>51X</b>	<b>332</b>	<b>3320</b>	<b>51A</b>	<b>3.32k</b>	<b>3321</b>	<b>51B</b>	<b>33.2k</b>	<b>3322</b>	<b>51C</b>	<b>332k</b>	<b>3323</b>	<b>51D</b>			
			34.0	34R0	52X	340	3400	52A	3.40k	3401	52B	34.0k	3402	52C	340k	3403	52D			
			34.8	34R8	53X	348	3480	53A	3.48k	3481	53B	34.8k	3482	53C	348k	3483	53D			
			<b>35.7</b>	<b>35R7</b>	<b>54X</b>	<b>357</b>	<b>3570</b>	<b>54A</b>	<b>3.57k</b>	<b>3571</b>	<b>54B</b>	<b>35.7k</b>	<b>3572</b>	<b>54C</b>	<b>357k</b>	<b>3573</b>	<b>54D</b>			
			36.5	36R5	55X	365	3650	55A	3.65k	3651	55B	36.5k	3652	55C	365k	3653	55D			
			37.4	37R4	56X	374	3740	56A	3.74k	3741	56B	37.4k	3742	56C	374k	3743	56D			
			38.3	38R3	57X	383	3830	57A	3.83k	3831	57B	38.3k	3832	57C	383k	3833	57D			
			<b>39.2</b>	<b>39R2</b>	<b>58X</b>	<b>392</b>	<b>3920</b>	<b>58A</b>	<b>3.92k</b>	<b>3921</b>	<b>58B</b>	<b>39.2k</b>	<b>3922</b>	<b>58C</b>	<b>392k</b>	<b>3923</b>	<b>58D</b>			
		4.02	<b>40.2</b>	<b>40R2</b>	<b>59X</b>	<b>402</b>	<b>4020</b>	<b>59A</b>	<b>4.02k</b>	<b>4021</b>	<b>59B</b>	<b>40.2k</b>	<b>4022</b>	<b>59C</b>	<b>402k</b>	<b>4023</b>	<b>59D</b>	4.02M	4024	59E
			41.2	41R2	60X	412	4120	60A	4.12k	4121	60B	41.2k	4122	60C	412k	4123	60D			
			42.2	42R2	61X	422	4220	61A	4.22k	4221	61B	42.2k	4222	61C	422k	4223	61D			
			<b>43.2</b>	<b>43R2</b>	<b>62X</b>	<b>432</b>	<b>4320</b>	<b>62A</b>	<b>4.32k</b>	<b>4321</b>	<b>62B</b>	<b>43.2k</b>	<b>4322</b>	<b>62C</b>	<b>432k</b>	<b>4323</b>	<b>62D</b>			
			44.2	44R2	63X	442	4420	63A	4.42k	4421	63B	44.2k	4422	63C	442k	4423	63D			
			45.3	45R3	64X	453	4530	64A	4.53k	4531	64B	45.3k	4532	64C	453k	4533	64D			
			46.4	46R4	65X	464	4640	65A	4.64k	4641	65B	46.4k	4642	65C	464k	4643	65D			



Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking	Resistance	4 Digit Marking	3 Digit Marking			
			47.5	47R5	66X	475	4750	66A	4.75k	4751	66B	47.5k	4752	66C	475k	4753	66D						
			48.7	48R7	67X	487	4870	67A	4.87k	4871	67B	48.7k	4872	67C	487k	4873	67D						
0.50	0R5		4.99	4R99	68Y	49.9	49R9	68X	499	5990	68A	4.99k	4991	68B	49.9k	4992	68C	499k	4993	68D	4.99M	4994	68E
			51.1	51R1	69X	511	5110	69A	5.11k	5111	69B	51.1k	5112	69C	511k	5113	69D						
			52.3	52R3	70X	523	5230	70A	5.23k	5231	70B	52.3k	5232	70C	523k	5233	70D						
			53.6	53R6	71X	536	5360	71A	5.36k	5361	71B	53.6k	5362	71C	536k	5363	71D						
			54.9	54R9	72X	549	5490	72A	5.49k	5491	72B	54.9k	5492	72C	549k	5493	72D						
			56.2	56R2	73X	562	5620	73A	5.62k	5621	73B	56.2k	5622	73C	562k	5623	73D						
			57.6	57R6	74X	576	5760	74A	5.76k	5761	74B	57.6k	5762	74C	576k	5763	74D						
			5.90	5R90	75Y	59.0	59R0	75X	590	5900	75A	5.90k	5901	75B	59.0k	5902	75C	590k	5903	75D	5.90M	5904	75E
			60.4	60R4	76X	604	6040	76A	6.04k	6041	76B	60.4k	6042	76C	604k	6043	76D						
			61.9	61R9	77X	619	6190	77A	6.19k	6191	77B	61.9k	6192	77C	619k	6193	77D						
			63.4	63R4	78X	634	6340	78A	6.34k	6341	78B	63.4k	6342	78C	634k	6343	78D						
			64.9	64R9	79X	649	6490	79A	6.49k	6491	79B	64.9k	6492	79C	649k	6493	79D						
			66.5	66R5	80X	665	6650	80A	6.65k	6651	80B	66.5k	6652	80C	665k	6653	80D						
			6.81	6R81	81Y	68.1	68R1	81X	681	6810	81A	6.81k	6811	81B	68.1k	6812	81C	681k	6813	81D	6.81M	6814	81E
			69.8	69R8	82X	698	6980	82A	6.98k	6981	82B	69.8k	6982	82C	698k	6983	82D						
			71.5	71R5	83X	715	7150	83A	7.15k	7151	83B	71.5k	7152	83C	715k	7153	83D						
			73.2	73R2	84X	732	7320	84A	7.32k	7321	84B	73.2k	7322	84C	732k	7323	84D						
			7.50	7R50	85Y	75.0	75R0	85X	750	7500	85A	7.50k	7501	85B	75.0k	7502	85C	750k	7503	85D	7.50M	7504	85E
			76.8	76R8	86X	768	7680	86A	7.68k	7681	86B	76.8k	7682	86C	768k	7683	86D						
			78.7	78R7	87X	787	7870	87A	7.87k	7871	87B	78.7k	7872	87C	787k	7873	87D						
			80.6	80R6	88X	806	8060	88A	8.06k	8061	88B	80.6k	8062	88C	806k	8063	88D						
			8.25	8R25	89Y	82.5	82R5	89X	825	8250	89A	8.25k	8251	89B	82.5k	8252	89C	825k	8253	89D	8.25M	8254	89E
			84.5	84R5	90X	845	8450	90A	8.45k	8451	90B	84.5k	8452	90C	845k	8453	90D						
			86.6	86R6	91X	866	8660	91A	8.66k	8661	91B	86.6k	8662	91C	866k	8663	91D						
			88.7	88R7	92X	887	8870	92A	8.87k	8871	92B	88.7k	8872	92C	887k	8873	92D						
			9.09	9R09	93Y	90.9	90R9	93X	909	9090	93A	9.09k	9091	93B	90.9k	9092	93C	909k	9093	93D	9.09M	9094	93E
			93.1	93R1	94X	931	9310	94A	9.31k	9311	94B	93.1k	9312	94C	931k	9313	94D	10M	1005	94E			
			95.3	95R3	95X	953	9530	95A	9.53k	9531	95B	95.3k	9532	95C	953k	9533	95D	15M	1505	95E			
			97.6	97R6	96X	976	9760	96A	9.76k	9761	96B	97.6k	9762	96C	976k	9763	96D	20M	2005	96E			

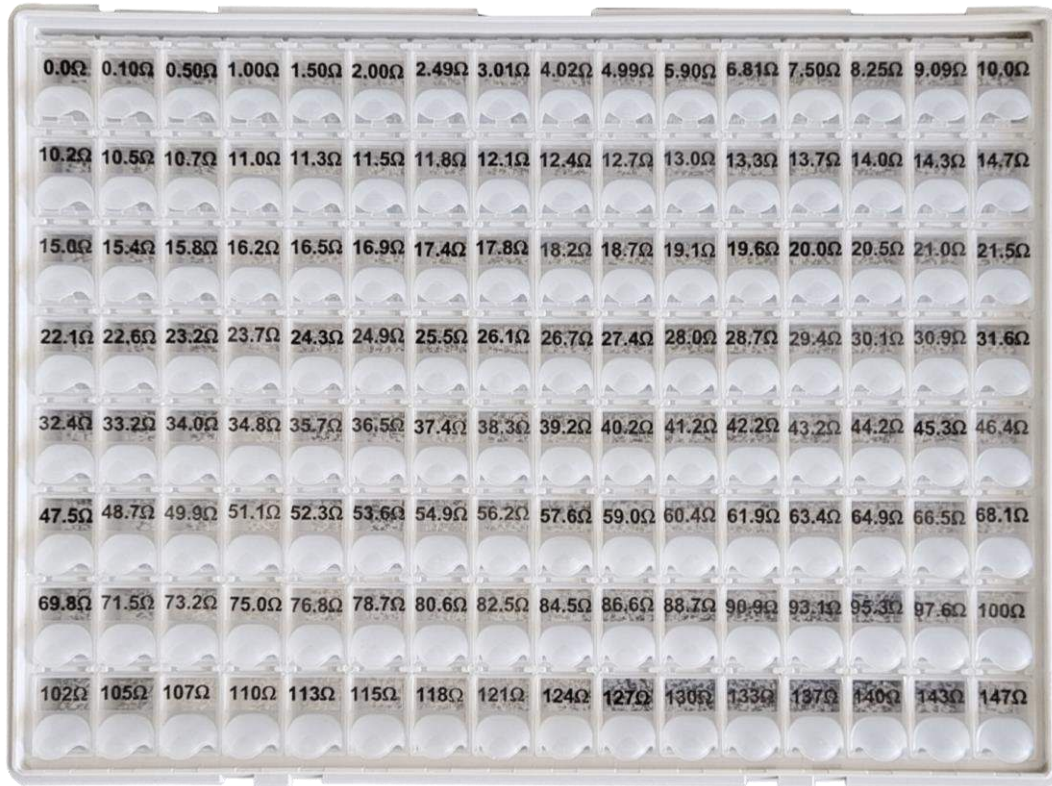


Figure 6. 510 Value Resistor Kit 4-1 Bin Layout

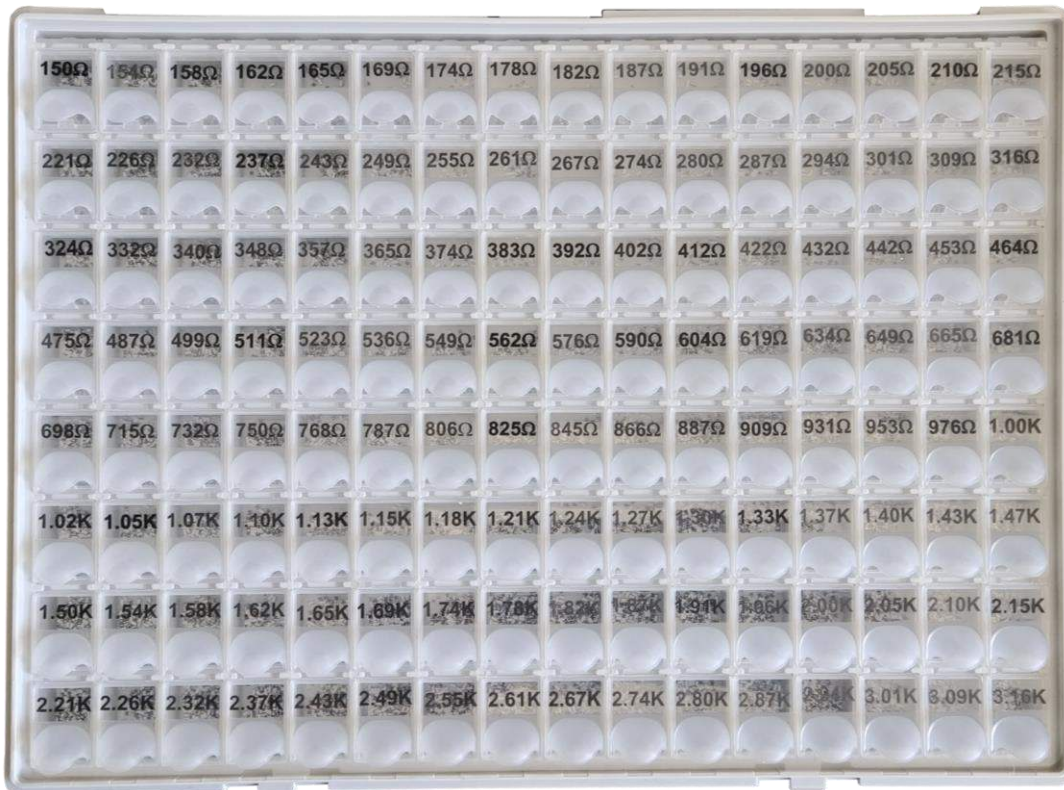


Figure 7. 510 Value Resistor Kit 4-2 Bin Layout



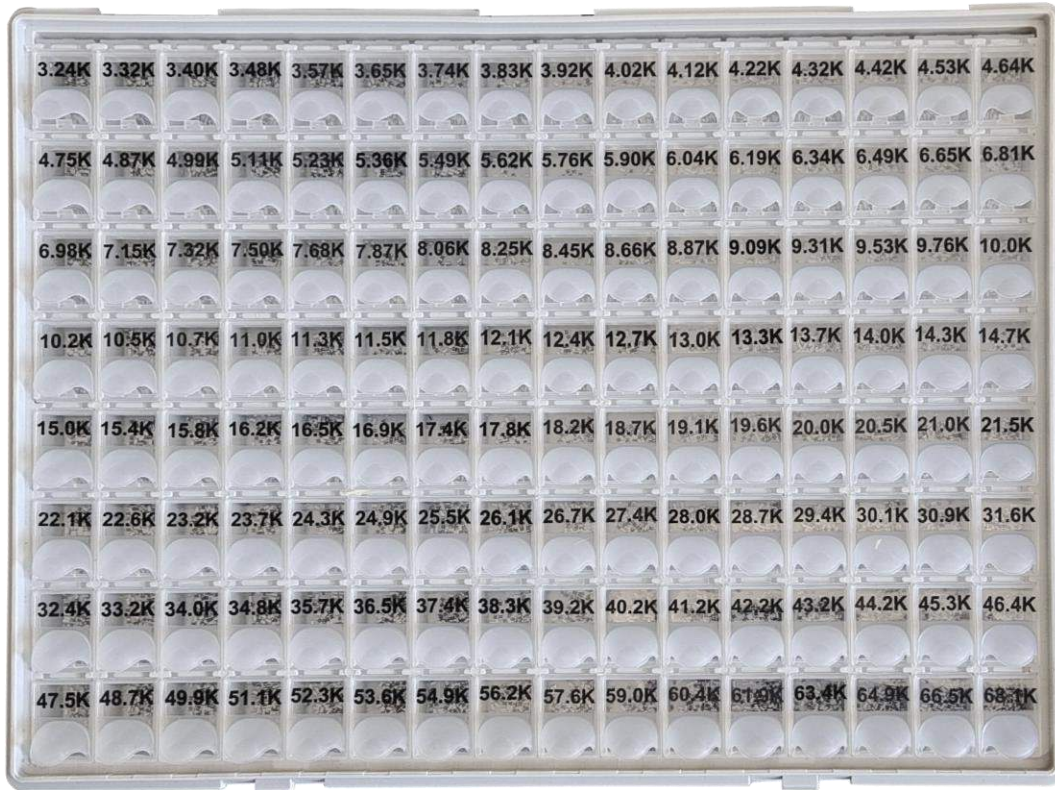


Figure 8. 510 Value Resistor Kit 4-3 Bin Layout

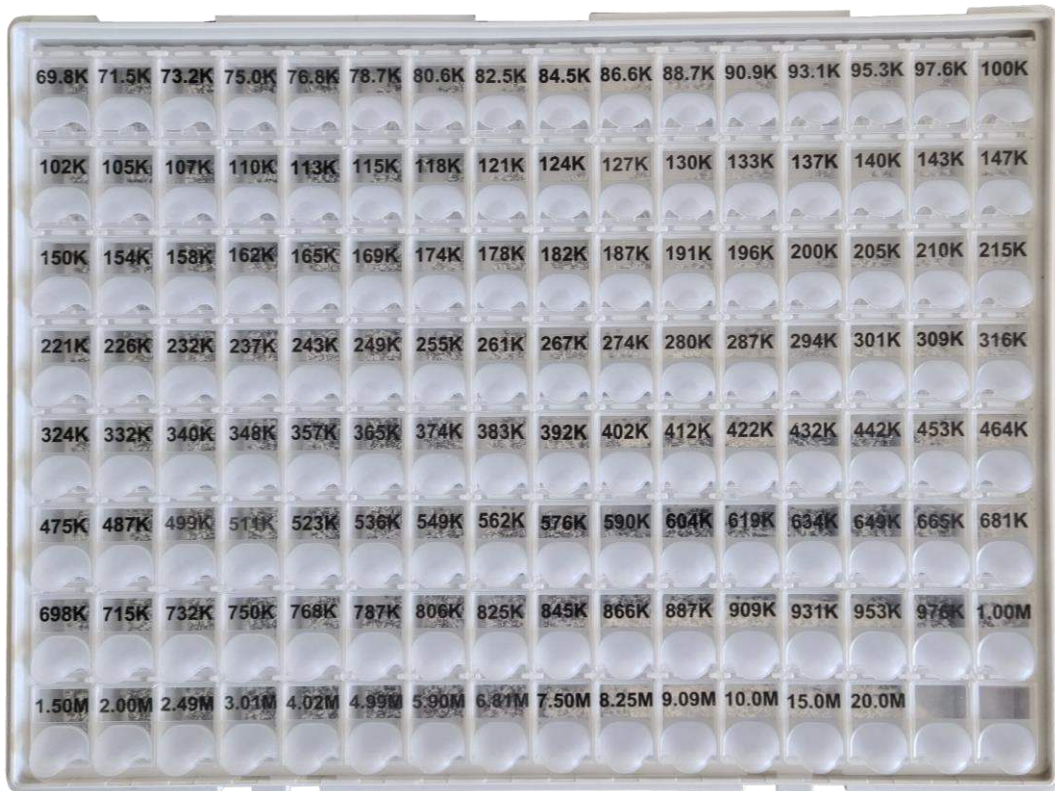
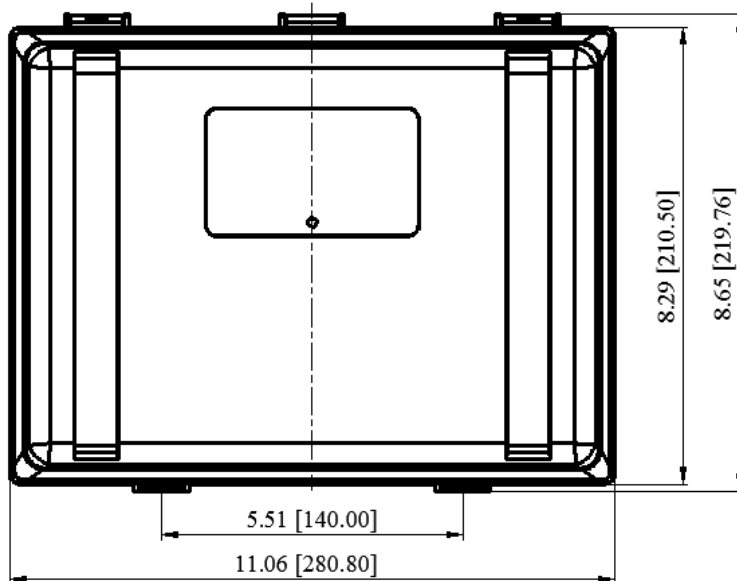
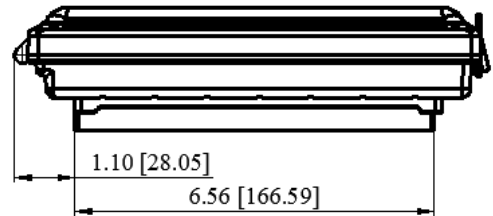
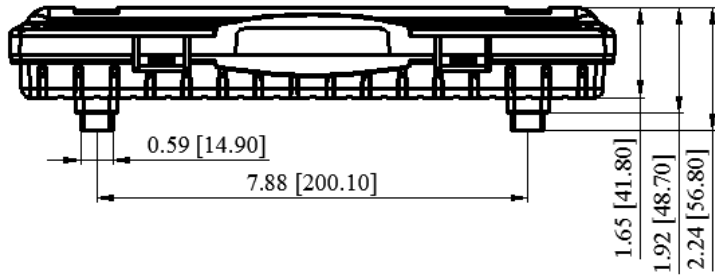


Figure 9. 510 Value Resistor Kit 4-4 Bin Layout



DIMENSIONS



Front View	Side View
Top View	Unit: inch [mm]

Figure 10. Outlines Dimensions

NOTICE

1. It is important to carefully read and follow the warnings, cautions, and product-specific notes provided with electronic components. These instructions are designed to ensure the safe and proper use of the component and to prevent damage to the component or surrounding equipment. Failure to follow these instructions could result in malfunction or failure of the component, damage to surrounding equipment, or even injury or harm to individuals. Always take the necessary precautions and seek professional assistance if unsure about proper use or handling of electronic components.
2. Please note that the products and specifications described in this publication are subject to change without prior notice as we continuously improve our products. Therefore, we recommend checking the product descriptions and specifications before placing an order to ensure that they are still applicable. We also reserve the right to discontinue the production and delivery of certain products, which means that not all products named in this publication may always be available.
3. This means that while ATI may provide information about the typical requirements and applications of their products, they cannot guarantee that their products will be suitable for all customer applications. It is the responsibility of the customer to evaluate whether an ATI product with the specified properties is appropriate for their particular application.
4. ATI warrants its products to perform according to specifications for one year from the date of sale, except when damaged due to excessive abuse. If a product fails to meet specifications within one year of the sale, it can be



exchanged free of charge.

5. ATI reserves the right to make changes or discontinue products or services without notice. Customers are advised to obtain the latest information before placing orders.
6. All products are sold subject to terms and conditions of sale, including those pertaining to warranty, patent infringement, and limitation of liability. Customers are responsible for their applications using ATI products, and ATI assumes no liability for applications assistance or customer product design.
7. ATI does not grant any license, either express or implied, under any patent right, copyright, mask work right, or other intellectual property right of ATI.
8. ATI's publication of information regarding third-party products or services does not constitute approval, warranty, or endorsement.
9. ATI retains ownership of all rights for special technologies, techniques, and designs for its products and projects, as well as any modifications, improvements, and inventions made by ATI.
10. Please note that despite operating the passive electronic components as specified, malfunctions or failures before the end of their usual service life may still occur in individual cases due to the current state of the art. Therefore, in customer applications that require a high level of operational safety, especially those in which the malfunction or failure of a passive electronic component could pose a threat to human life or health (such as in accident prevention or life-saving systems), it is essential to ensure through suitable design of the customer application or other measures taken by the customer (such as the installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the event of a passive electronic component malfunction or failure.