

# SLC/SLR Series

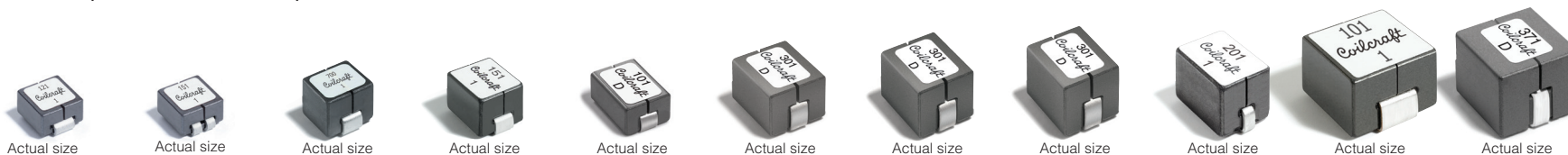
## High current, low DCR power inductors



Key

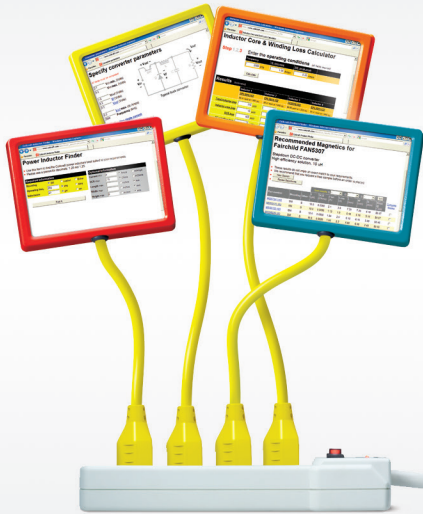
<b>2.5</b>	0.05
Isat (A)	DCR (mOhms)

- 1 Find your required inductance in the far left column.
- 2 Scan the row until you find the desired current rating (bold number); parts from there to the right meet your requirement.
- 3 Read up to see the Coilcraft product series and dimensions.



	SLC7530S Shielded (Single)	SLC7530D Shielded (Dual)	SLC7649 Shielded	SLC1049 Shielded	SLR1050 Shielded	SLR1065 Shielded	SLR1070 Shielded	SLR1075 Shielded	SLC1175 Shielded	SLC1480 Shielded	SLR1190 Shielded
Base (mm)	7.5 × 6.7	7.5 × 6.7	7.62 × 7.49	10.2 × 6.88	10.2 × 7.0	10.4 × 8.0	10.4 × 8.0	10.4 × 8.0	11.0 × 7.65	13.5 × 13	11.2 × 10.3
Height (mm)	3	3.00	4.96	5.16	4.95	6.60	7	7.40	7.2	8.00	9
<b>Inductance</b>											
0.036 μH			<b>100</b> 0.17								
0.050 μH	<b>50</b> 0.13		<b>84</b> 0.17								
0.064 μH	<b>32</b> 0.13										
0.070 μH			<b>65</b> 0.17						> <b>100</b> 0.24		
0.075 μH				<b>61</b> 0.23							
0.082 μH	<b>22</b> 0.13										
0.085 μH						<b>86</b> 0.39					
0.10 μH	<b>20</b> 0.13		<b>42</b> 0.17	<b>50</b> 0.23	<b>78</b> 0.39						
0.11 μH										<b>130</b> 0.150	
0.12 μH			<b>33</b> 0.17	<b>37</b> 0.23	<b>65</b> 0.39	<b>86</b> 0.48	<b>86</b> 0.29	<b>93</b> 0.29	<b>88</b> 0.24		
0.13 μH										<b>112</b> 0.150	
0.14 μH						<b>75</b> 0.48	<b>78</b> 0.29				
0.15 μH			<b>27</b> 0.17	<b>30</b> 0.23	<b>51</b> 0.39			<b>72</b> 0.29	<b>76</b> 0.24	<b>97</b> 0.150	<b>100</b> 0.43
0.17 μH						<b>64</b> 0.48	<b>64</b> 0.29	<b>65</b> 0.29	<b>63</b> 0.24	<b>90</b> 0.150	
0.18 μH											
0.19 μH		<b>21</b> 1.00									
0.20 μH									<b>55</b> 0.24	<b>76</b> 0.150	<b>86</b> 0.43
0.22 μH					<b>35</b> 0.39	<b>51</b> 0.48	<b>51</b> 0.29	<b>53</b> 0.29			
0.23 μH				<b>25.5</b> 0.23				<b>49</b> 0.29	<b>49</b> 0.24	<b>67</b> 0.150	<b>72</b> 0.43
0.25 μH							<b>38</b> 0.29				<b>66</b> 0.43
0.26 μH										<b>61</b> 0.150	
0.27 μH		<b>14</b> 1.00						<b>41</b> 0.29	<b>40</b> 0.24		<b>58</b> 0.43
0.28 μH								<b>33</b> 0.29			
0.30 μH						<b>32</b> 0.48	<b>31</b> 0.29	<b>36</b> 0.29	<b>34</b> 0.24	<b>52</b> 0.150	
0.31 μH											<b>52</b> 0.43
0.32 μH										<b>48</b> 0.150	
0.36 μH		<b>11</b> 1.00									
0.37 μH											<b>41</b> 0.43
0.40 μH		<b>8.0</b> 1.00									
0.44 μH										<b>35</b> 0.150	
0.56 μH											
0.68 μH											
0.78 μH											
1.0 μH											
1.2 μH											

For free evaluation samples or to view other Coilcraft power inductors, visit [www.coilcraft.com](http://www.coilcraft.com)



# Plug into these powerful inductor selection tools on Coilcraft's web site

### 1.0 to 1.5 $\mu$ H inductors that handle $\geq 2.0$ A peak at 25°C

Ambient temperature 25°C

Part number	L actual $\mu$ H	L nominal $\mu$ H	I peak A	I rms A	DCR $\text{m}\Omega$	Total losses mW	Temp. rise $^{\circ}\text{C}$	Footprint
MSL4920-152	1.45	1.50	9.00	7.50	23.60	5.1	27°C	18
MSS1038-102	1.03	1.00	4.70	10.00	6.00	17	26°C	107
MILC1245-152	1.45	1.50	28.50	14.20	4.49	32	26°C	125°C
LPS5030-122	1.24	1.20	4.00	2.65	43.00	108	41°C	125°C

Inductor losses at 100 kHz, 1.67 A rms, 0.8 A pk-pk

Part number	Total losses $\text{mW}$	Temperature rise $^{\circ}\text{C}$
MSS1038-102	17 mW	1°C
LPS5030-122	108 mW	15°C

## Power Inductor Finder

[www.coilcraft.com/finder](http://www.coilcraft.com/finder)

Use our new Power Inductor Finder tool to identify and compare inductors based on your exact requirements: current, ripple, frequency, ambient temperature, etc. Search across a range of inductances. Optimize the results for size, DCR, price or any other parameter. Then graph the inductance vs. current at temperature.

### Power Inductor Analysis & Comparison Tool

Quickly determine the losses you can expect under your specific operating conditions. Analyze a single inductor value or compare the losses of up to six parts to help you find the perfect part for your design. Explore losses further with Losses vs. Ripple and Losses vs. Frequency graphs.

## Analyze+Compare Tool

[www.coilcraft.com/analyze](http://www.coilcraft.com/analyze)

Quickly determine the losses you can expect under your specific operating conditions. Analyze a single inductor value or compare the losses of up to six parts to help you find the perfect part for your design. Explore losses further with Losses vs. Ripple and Losses vs. Frequency graphs.

### Recommended Magnetics for Texas Instruments LM27403

Application Buck controller Design 5, LT, 270 oh

### 0.27 $\mu$ H inductors

Ambient temperature 25°C

Part number	Inductance $\mu$ H	Current A	DCR $\text{m}\Omega$	Temp. rise $^{\circ}\text{C}$	Footprint
MSS4920-221	0.280	35.00	26.70	0.0024	1728
MSS4920-221	0.270	37.00	25.00	0.0039	2811
MILC2520-221	0.220	69.20	26.50	0.0028	2028
MSS2520-261	0.300	55.60	33.40	0.0012	221
MSS2520-261	0.300	41.00	27.60	0.0019	3483
MSS1038-221	0.220	35.00	77.10	0.0004	382

## IC / Inductor Matching Tool

[www.coilcraft.com/ic](http://www.coilcraft.com/ic)

Use this handy tool to find Coilcraft products suitable for use with 1000s of IC reference designs. Get a sortable list including our newest products that often perform better and cost less than those on the application note.

### Specify converter parameters

All fields must be completed

2.7 V<sub>in min.</sub> (Volts)  
5.5 V<sub>in max.</sub> (Volts)

1.8 V<sub>out</sub> (Volts)  
0.3 V<sub>f</sub> (Volts)  
0.3 V<sub>sat</sub> (Volts)

0.3 I<sub>out max.</sub> (dc Amps)  
5000 Frequency (kHz)

20% Max ripple current

Calculate inductor requirements

Typical buck converter

## Converter Inductor Calculator

[www.coilcraft.com/cal](http://www.coilcraft.com/cal)

An invaluable tool for anyone designing buck, boost, buck-boost or SEPIC converters. Obtain a detailed list of all suitable Coilcraft components that meet your specified parameters and inductor specifications.