

# Wire Wound SMD Power Inductors – SWRH-DS Series

Operating Temperature: -40°C~+105°C (Including self-heating)



## FEATURES

- Various high power inductors are superior to be high saturation
- Suitable for surface mounting equipment

## APPLICATIONS

- Power supply choke for small electrical equipments such as VTR, LCD display, Notebook, communication equipment, and so on.

## PRODUCT IDENTIFICATION

**SWRH**

①

**3D16**

②

**S**

③

**-1R5**

④

**N**

⑤

**T**

⑥

①	Type
SWRH	Wire Wound SMD Type Power Inductors (With Metallic Base)

③	Configuration
S	S Type Base

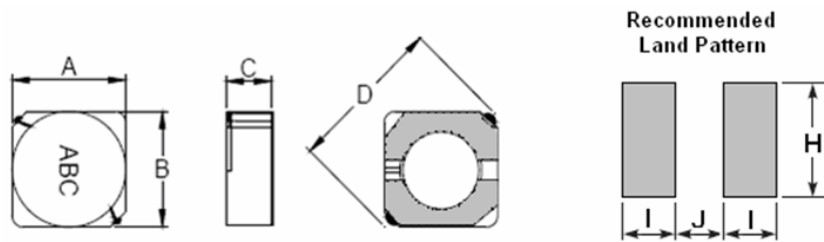
⑤	Inductance Tolerance
M	±20%
N	±30%

②	External Dimensions
	3D16~6D38

④	Nominal Inductance
Example	Nominal Value
1R5	1.5μH
100	10μH
101	100μH

⑥	Packing
T	Tape Carrier Package

## SHAPE AND DIMENSIONS



Series	A max.	B max.	C max.	D typ.	I typ.	J typ.	H typ.
SWRH3D16S	4.2	4.2	1.8	5.5	1.7	1.1	4.5
SWRH3D18S	4.2	4.2	2.1	5.5	1.7	1.1	4.5
SWRH3D28S	4.2	4.2	3.2	5.5	1.7	1.1	4.5
SWRH4D18S	5.0	5.0	2.0	6.9	1.9	1.5	5.3
SWRH4D28S	5.0	5.0	3.0	6.9	1.9	1.5	5.3
SWRH5D18S	6.0	6.0	2.0	8.2	2.1	2.0	6.3
SWRH5D28S	6.0	6.0	3.0	8.2	2.1	2.0	6.3
SWRH6D28S	7.0	7.0	3.0	9.5	2.6	2.0	7.3
SWRH6D38S	7.0	7.0	4.0	9.5	2.6	2.0	7.3

## SPECIFICATIONS

### SWRH3D16S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH3D16S-1R5NT	1.5±30%	100k, 0.3V	0.052	1.35
SWRH3D16S-2R2NT	2.2±30%	100k, 0.3V	0.072	1.20
SWRH3D16S-3R3NT	3.3±30%	100k, 0.3V	0.085	1.10
SWRH3D16S-4R7NT	4.7±30%	100k, 0.3V	0.105	0.90
SWRH3D16S-6R8NT	6.8±30%	100k, 0.3V	0.170	0.73
SWRH3D16S-8R2NT	8.2±30%	100k, 0.3V	0.190	0.66
SWRH3D16S-100MT	10±20%	1k, 0.3V	0.210	0.55
SWRH3D16S-150MT	15±20%	1k, 0.3V	0.295	0.45
SWRH3D16S-220MT	22±20%	1k, 0.3V	0.430	0.40
SWRH3D16S-330MT	33±20%	1k, 0.3V	0.660	0.32

### SWRH3D18S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH3D18S-3R3NT	3.3±30%	100k, 0.3V	0.088	1.45
SWRH3D18S-4R7NT	4.7±30%	100k, 0.3V	0.107	1.35
SWRH3D18S-6R8NT	6.8±30%	100k, 0.3V	0.150	1.10
SWRH3D18S-8R2NT	8.2±30%	100k, 0.3V	0.185	1.00
SWRH3D18S-100MT	10±20%	1k, 0.3V	0.205	0.90
SWRH3D18S-150MT	15±20%	1k, 0.3V	0.301	0.75
SWRH3D18S-220MT	22±20%	1k, 0.3V	0.424	0.60
SWRH3D18S-330MT	33±20%	1k, 0.3V	0.640	0.45
SWRH3D18S-470MT	47±20%	1k, 0.3V	0.964	0.35

### SWRH3D28S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH3D28S-3R3NT	3.3±30%	100k, 0.3V	0.072	2.00
SWRH3D28S-4R7NT	4.7±30%	100k, 0.3V	0.088	1.65
SWRH3D28S-6R8NT	6.8±30%	100k, 0.3V	0.119	1.24
SWRH3D28S-8R2NT	8.2±30%	100k, 0.3V	0.132	1.15
SWRH3D28S-100MT	10±20%	1k, 0.3V	0.145	1.05
SWRH3D28S-150MT	15±20%	1k, 0.3V	0.213	0.90
SWRH3D28S-220MT	22±20%	1k, 0.3V	0.335	0.76
SWRH3D28S-330MT	33±20%	1k, 0.3V	0.481	0.58
SWRH3D28S-470MT	47±20%	1k, 0.3V	0.599	0.48

### SWRH4D18S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH4D18S-1R0NT	1.0±30%	100k, 0.3V	0.045	1.72
SWRH4D18S-2R2NT	2.2±30%	100k, 0.3V	0.075	1.32
SWRH4D18S-2R7NT	2.7±30%	100k, 0.3V	0.105	1.28
SWRH4D18S-3R3NT	3.3±30%	100k, 0.3V	0.110	1.04
SWRH4D18S-3R9NT	3.9±30%	100k, 0.3V	0.155	0.88
SWRH4D18S-4R7NT	4.7±30%	100k, 0.3V	0.162	0.84

## SPECIFICATIONS

### SWRH4D18S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	μH	Hz, V	Ω	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH4D18S-5R6NT	5.6±30%	100k, 0.3V	0.170	0.80
SWRH4D18S-6R8NT	6.8±30%	100k, 0.3V	0.190	0.76
SWRH4D18S-8R2NT	8.2±30%	100k, 0.3V	0.195	0.68
SWRH4D18S-100MT	10±20%	1k, 0.3V	0.200	0.61
SWRH4D18S-120MT	12±20%	1k, 0.3V	0.210	0.56
SWRH4D18S-150MT	15±20%	1k, 0.3V	0.240	0.50
SWRH4D18S-180MT	18±20%	1k, 0.3V	0.338	0.48
SWRH4D18S-220MT	22±20%	1k, 0.3V	0.397	0.41
SWRH4D18S-270MT	27±20%	1k, 0.3V	0.441	0.35
SWRH4D18S-330MT	33±20%	1k, 0.3V	0.694	0.32
SWRH4D18S-390MT	39±20%	1k, 0.3V	0.709	0.30
SWRH4D18S-470MT	47±20%	1k, 0.3V	0.922	0.28
SWRH4D18S-560MT	56±20%	1k, 0.3V	1.080	0.26
SWRH4D18S-680MT	68±20%	1k, 0.3V	1.300	0.24
SWRH4D18S-820MT	82±20%	1k, 0.3V	1.560	0.22
SWRH4D18S-101MT	100±20%	1k, 0.3V	1.730	0.20
SWRH4D18S-121MT	120±20%	1k, 0.3V	2.390	0.18
SWRH4D18S-151MT	150±20%	1k, 0.3V	2.670	0.15

### SWRH4D28S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	μH	Hz, V	Ω	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH4D28S-1R0NT	1.0±30%	100k, 0.3V	0.022	2.60
SWRH4D28S-1R2NT	1.2±30%	100k, 0.3V	0.024	2.56
SWRH4D28S-2R2NT	2.2±30%	100k, 0.3V	0.031	2.04
SWRH4D28S-3R3NT	3.3±30%	100k, 0.3V	0.049	1.57
SWRH4D28S-4R7NT	4.7±30%	100k, 0.3V	0.072	1.32
SWRH4D28S-5R6NT	5.6±30%	100k, 0.3V	0.101	1.17
SWRH4D28S-6R8NT	6.8±30%	100k, 0.3V	0.108	1.12
SWRH4D28S-8R2NT	8.2±30%	100k, 0.3V	0.118	1.04
SWRH4D28S-100MT	10±20%	1k, 0.3V	0.128	1.00
SWRH4D28S-120MT	12±20%	1k, 0.3V	0.132	0.84
SWRH4D28S-150MT	15±20%	1k, 0.3V	0.149	0.76
SWRH4D28S-180MT	18±20%	1k, 0.3V	0.165	0.72
SWRH4D28S-220MT	22±20%	1k, 0.3V	0.235	0.70
SWRH4D28S-330MT	33±20%	1k, 0.3V	0.331	0.56
SWRH4D28S-390MT	39±20%	1k, 0.3V	0.384	0.50
SWRH4D28S-470MT	47±20%	1k, 0.3V	0.587	0.48
SWRH4D28S-560MT	56±20%	1k, 0.3V	0.624	0.41
SWRH4D28S-680MT	68±20%	1k, 0.3V	0.699	0.35
SWRH4D28S-820MT	82±20%	1k, 0.3V	0.915	0.32
SWRH4D28S-101MT	100±20%	1k, 0.3V	1.020	0.29
SWRH4D28S-121MT	120±20%	1k, 0.3V	1.270	0.27
SWRH4D28S-151MT	150±20%	1k, 0.3V	1.350	0.24

## SPECIFICATIONS

### SWRH5D18S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH5D18S-3R3NT	3.3±30%	100k, 0.3V	0.053	2.00
SWRH5D18S-4R7NT	4.7±30%	100k, 0.3V	0.060	1.90
SWRH5D18S-5R6NT	5.6±30%	100k, 0.3V	0.076	1.60
SWRH5D18S-6R8NT	6.8±30%	100k, 0.3V	0.105	1.40
SWRH5D18S-8R2NT	8.2±30%	100k, 0.3V	0.117	1.30
SWRH5D18S-100MT	10±20%	1k, 0.3V	0.124	1.20
SWRH5D18S-120MT	12±20%	1k, 0.3V	0.153	1.10
SWRH5D18S-180MT	18±20%	1k, 0.3V	0.210	0.85
SWRH5D18S-220MT	22±20%	1k, 0.3V	0.290	0.80
SWRH5D18S-270MT	27±20%	1k, 0.3V	0.330	0.75
SWRH5D18S-330MT	33±20%	1k, 0.3V	0.386	0.65
SWRH5D18S-390MT	39±20%	1k, 0.3V	0.520	0.57
SWRH5D18S-470MT	47±20%	1k, 0.3V	0.595	0.54
SWRH5D18S-560MT	56±20%	1k, 0.3V	0.665	0.50
SWRH5D18S-680MT	68±20%	1k, 0.3V	0.84	0.43
SWRH5D18S-820MT	82±20%	1k, 0.3V	0.978	0.41
SWRH5D18S-101MT	100±20%	1k, 0.3V	1.200	0.36
SWRH5D18S-121MT	120±20%	1k, 0.3V	1.500	0.33
SWRH5D18S-151MT	150±20%	1k, 0.3V	1.710	0.31

### SWRH5D28S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH5D28S-2R2NT	2.2±30%	100k, 0.3V	0.017	2.60
SWRH5D28S-3R3NT	3.3±30%	100k, 0.3V	0.029	2.40
SWRH5D28S-4R7NT	4.7±30%	100k, 0.3V	0.039	2.10
SWRH5D28S-6R8NT	6.8±30%	100k, 0.3V	0.048	1.85
SWRH5D28S-8R2NT	8.2±30%	100k, 0.3V	0.057	1.58
SWRH5D28S-100MT	10±20%	1k, 0.3V	0.065	1.30
SWRH5D28S-120MT	12±20%	1k, 0.3V	0.076	1.20
SWRH5D28S-180MT	18±20%	1k, 0.3V	0.110	1.00
SWRH5D28S-220MT	22±20%	1k, 0.3V	0.122	0.90
SWRH5D28S-330MT	33±20%	1k, 0.3V	0.189	0.75
SWRH5D28S-470MT	47±20%	1k, 0.3V	0.250	0.62
SWRH5D28S-560MT	56±20%	1k, 0.3V	0.305	0.58
SWRH5D28S-680MT	68±20%	1k, 0.3V	0.355	0.52
SWRH5D28S-820MT	82±20%	1k, 0.3V	0.463	0.46
SWRH5D28S-101MT	100±20%	1k, 0.3V	0.520	0.42
SWRH5D28S-121MT	120±20%	1k, 0.3V	0.560	0.40
SWRH5D28S-151MT	150±20%	1k, 0.3V	0.680	0.35
SWRH5D28S-181MT	180±20%	1k, 0.3V	0.930	0.32
SWRH5D28S-221MT	220±20%	1k, 0.3V	1.150	0.30
SWRH5D28S-271MT	270±20%	1k, 0.3V	1.560	0.27
SWRH5D28S-331MT	330±20%	1k, 0.3V	1.980	0.25

## SPECIFICATIONS

### SWRH6D28S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu$ H	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH6D28S-3R3NT	3.3±30%	100k, 0.3V	0.026	2.80
SWRH6D28S-4R7NT	4.7±30%	100k, 0.3V	0.031	2.40
SWRH6D28S-6R8NT	6.8±30%	100k, 0.3V	0.042	2.20
SWRH6D28S-8R2NT	8.2±30%	100k, 0.3V	0.055	1.95
SWRH6D28S-100MT	10±20%	1k, 0.3V	0.065	1.70
SWRH6D28S-150MT	15±20%	1k, 0.3V	0.084	1.40
SWRH6D28S-180MT	18±20%	1k, 0.3V	0.095	1.32
SWRH6D28S-220MT	22±20%	1k, 0.3V	0.128	1.20
SWRH6D28S-330MT	33±20%	1k, 0.3V	0.165	0.97
SWRH6D28S-470MT	47±20%	1k, 0.3V	0.238	0.80
SWRH6D28S-560MT	56±20%	1k, 0.3V	0.277	0.73
SWRH6D28S-680MT	68±20%	1k, 0.3V	0.304	0.65
SWRH6D28S-820MT	82±20%	1k, 0.3V	0.390	0.60
SWRH6D28S-101MT	100±20%	1k, 0.3V	0.535	0.54
SWRH6D28S-121MT	120±20%	1k, 0.3V	0.750	0.51
SWRH6D28S-151MT	150±20%	1k, 0.3V	0.950	0.47
SWRH6D28S-181MT	180±20%	1k, 0.3V	1.200	0.41
SWRH6D28S-221MT	220±20%	1k, 0.3V	1.500	0.37
SWRH6D28S-271MT	270±20%	1k, 0.3V	1.700	0.33
SWRH6D28S-331MT	330±20%	1k, 0.3V	2.150	0.28
SWRH6D28S-391MT	390±20%	1k, 0.3V	2.750	0.23

### SWRH6D38S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu$ H	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH6D38S-1R5NT	1.5±30%	100k, 0.3V	0.015	5.20
SWRH6D38S-2R2NT	2.2±30%	100k, 0.3V	0.018	4.50
SWRH6D38S-3R3NT	3.3±30%	100k, 0.3V	0.020	3.50
SWRH6D38S-4R7NT	4.7±30%	100k, 0.3V	0.025	2.80
SWRH6D38S-6R8NT	6.8±30%	100k, 0.3V	0.029	2.40
SWRH6D38S-8R2NT	8.2±30%	100k, 0.3V	0.034	2.20
SWRH6D38S-100MT	10±20%	1k, 0.3V	0.038	2.00
SWRH6D38S-120MT	12±20%	1k, 0.3V	0.053	1.70
SWRH6D38S-150MT	15±20%	1k, 0.3V	0.057	1.60
SWRH6D38S-180MT	18±20%	1k, 0.3V	0.092	1.50
SWRH6D38S-220MT	22±20%	1k, 0.3V	0.096	1.30
SWRH6D38S-270MT	27±20%	1k, 0.3V	0.109	1.20
SWRH6D38S-330MT	33±20%	1k, 0.3V	0.124	1.10
SWRH6D38S-390MT	39±20%	1k, 0.3V	0.138	1.00
SWRH6D38S-470MT	47±20%	1k, 0.3V	0.155	0.95
SWRH6D38S-560MT	56±20%	1k, 0.3V	0.202	0.85
SWRH6D38S-680MT	68±20%	1k, 0.3V	0.234	0.75
SWRH6D38S-820MT	82±20%	1k, 0.3V	0.324	0.70
SWRH6D38S-101MT	100±20%	1k, 0.3V	0.358	0.65
SWRH6D38S-121MT	120±20%	1k, 0.3V	0.470	0.59

## SPECIFICATIONS

### SWRH6D38S TYPE

Part Number	Inductance	L Test Condition	Max. DC Resistance	Max. Rated Current
Units	$\mu\text{H}$	Hz, V	$\Omega$	A
Symbol	L	-	DCR	I <sub>r</sub>
SWRH6D38S-151MT	150±20%	1k, 0.3V	0.580	0.54
SWRH6D38S-181MT	180±20%	1k, 0.3V	0.690	0.49
SWRH6D38S-221MT	220±20%	1k, 0.3V	0.890	0.43
SWRH6D38S-271MT	270±20%	1k, 0.3V	1.290	0.40
SWRH6D38S-331MT	330±20%	1k, 0.3V	1.700	0.37
SWRH6D38S-391MT	390±20%	1k, 0.3V	1.750	0.34
SWRH6D38S-471MT	470±20%	1k, 0.3V	2.200	0.32
SWRH6D38S-561MT	560±20%	1k, 0.3V	2.850	0.29
SWRH6D38S-681MT	680±20%	1k, 0.3V	3.200	0.25
SWRH6D38S-821MT	820±20%	1k, 0.3V	4.050	0.22
SWRH6D38S-102MT	1000±20%	1k, 0.3V	5.700	0.20

※The rated current is a smaller DC current which causes inductance to decrease by 35% or temperature to rise by 40°C.