

# SURFACE MOUNT POWER INDUCTORS

## PIC SERIES



Term.W is  
RoHS  
compliant  
& 260°C  
compatible



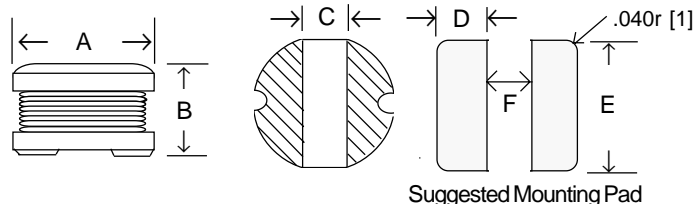
RESISTORS • CAPACITORS • COILS • DELAY LINES

- Industry's widest range and lowest cost!
- 0.68μH to 2200μH, 0.18A to 3.5A

### OPTIONS

- Option ER<sup>1</sup>: Military Screening
- Numerous design modifications are available including high frequency testing, shielded, increased current and temperature ratings, non-standard inductance values, custom marking, etc.

Series PIC inductors were developed to provide high current capability in an economical surface mount design. The cylindrical geometry enables a wide range of values with excellent high frequency performance. Construction is wirewound and utilizes a ferrite core. Units are marked with inductance value. Applications include noise filtering, DC/DC converters, telecom, power supplies, switching regulators, etc. Custom models available.



Type	A (Max)	B (Max)	C (Typ)	D	E	F
PIC1	.189 [4.8]	.138 [3.5]	.060 [1.5]	.070 [1.75]	.177 [4.5]	.060 [1.5]
PIC2	.240 [6.1]	.193 [4.9]	.070 [1.8]	.085 [2.15]	.225 [5.7]	.067 [1.7]
PIC3	.319 [8.1]	.157 [4.0]	.083 [2.1]	.120 [3.0]	.307 [7.8]	.080 [2]
PIC4	.319 [8.1]	.216 [5.5]	.083 [2.1]	.120 [3.0]	.307 [7.8]	.080 [2]
PIC5	.405 [10.3]	.177 [4.5]	.083 [2.1]	.150 [3.75]	.394 [10]	.100 [2.5]
PIC6	.409 [10.4]	.228 [5.8]	.083 [2.1]	.150 [3.75]	.394 [10]	.100 [2.5]
PIC7 <sup>2</sup>	.433 [11]	.295 [7.5]	.083 [2.1]	.160 [4.0]	.420 [10.7]	.110 [2.8]

Induc. Value (μH) & Std. Tol.	PIC1 Current Rating/DC Max. Resis	PIC2 Current Rating/DC Max. Resis	PIC3 Current Rating/DC Max. Resis	PIC4 Current Rating/DC Max. Resis	PIC5 Current Rating/DC Max. Resis	PIC6 Current Rating/DC Max. Resis	PIC7 <sup>2</sup> Current Rating/DC Max. Resis
.68 ±20%	2.60A / .045Ω	Consult RCD	Consult RCD	Consult RCD	Consult RCD	Consult RCD	Consult RCD
1.0 ±20%	2.56A / .049Ω	"	"	"	"	"	"
1.4 ±20%	2.52A / .057Ω	"	"	"	"	"	"
1.8 ±20%	1.95A / .064Ω	"	"	"	"	"	"
2.2 ±20%	1.75A / .072Ω	2.20A / .054Ω	"	"	"	"	"
2.7 ±20%	1.58A / .079Ω	2.10A / .057Ω	"	"	"	"	"
3.3 ±20%	1.44A / .087Ω	2.00A / .060Ω	"	"	"	"	"
3.9 ±20%	1.33A / .094Ω	1.90A / .065Ω	"	"	"	"	"
4.7 ±20%	1.15A / .109Ω	1.80A / .070Ω	1.78A / .054Ω	"	"	"	"
5.6 ±20%	1.10A / .126Ω	1.70A / .075Ω	1.68A / .060Ω	"	"	"	"
6.8 ±20%	1.08A / .132Ω	1.60A / .080Ω	1.58A / .067Ω	2.7A / 0.05Ω	"	"	"
8.2 ±20%	1.05A / .147Ω	1.50A / .090Ω	1.48A / .074Ω	2.5A / 0.06Ω	2.60A / 0.04Ω	"	"
10 ±20%	1.04A / .182Ω	1.45A / 0.10Ω	1.44A / 0.08Ω	2.3A / 0.07Ω	2.38A / 0.05Ω	2.60A / 0.06Ω	3.50A / 0.06Ω
12 ±20%	0.97A / .210Ω	1.40A / 0.12Ω	1.39A / 0.09Ω	2.0A / 0.08Ω	2.13A / 0.06Ω	2.45A / 0.07Ω	3.40A / 0.07Ω
15 ±20%	0.85A / .235Ω	1.30A / 0.14Ω	1.24A / 0.10Ω	1.8A / 0.09Ω	1.87A / 0.07Ω	2.27A / 0.08Ω	3.10A / 0.08Ω
18 ±20%	0.74A / .338Ω	1.25A / 0.15Ω	1.12A / 0.11Ω	1.6A / 0.10Ω	1.73A / 0.08Ω	2.15A / 0.09Ω	3.00A / 0.09Ω
22 ±20%	0.68A / .378Ω	1.11A / 0.19Ω	1.07A / 0.13Ω	1.5A / 0.11Ω	1.60A / 0.09Ω	1.95A / 0.10Ω	2.60A / 0.10Ω
27 ±20%	0.62A / .52Ω	1.00A / .22Ω	0.94A / .15Ω	1.3A / .12Ω	1.44A / .10Ω	1.76A / .11Ω	2.40A / .11Ω
33 ±10%	0.56A / .54Ω	0.88A / .25Ω	0.85A / .17Ω	1.2A / .14Ω	1.26A / .12Ω	1.50A / .12Ω	2.30A / .12Ω
39 ±10%	0.52A / .59Ω	0.80A / .32Ω	0.74A / .22Ω	1.1A / .16Ω	1.20A / .15Ω	1.37A / .14Ω	2.10A / .14Ω
47 ±10%	0.44A / .84Ω	0.72A / .37Ω	0.68A / .25Ω	1.0A / .20Ω	1.10A / .17Ω	1.28A / .17Ω	1.95A / .17Ω
56 ±10%	0.42A / .94Ω	0.68A / .42Ω	0.64A / .28Ω	.94A / .24Ω	1.00A / .20Ω	1.17A / .19Ω	1.85A / .19Ω
68 ±10%	0.37A / 1.12Ω	0.62A / .52Ω	0.59A / .33Ω	.85A / .28Ω	.91A / .22Ω	1.11A / .22Ω	1.65A / .22Ω
82 ±10%	0.33A / 1.37Ω	0.58A / .60Ω	0.54A / .41Ω	.78A / .37Ω	.85A / .25Ω	1.00A / .25Ω	1.50A / .25Ω
100 ±10%	0.30A / 1.66Ω	0.52A / .70Ω	0.51A / .48Ω	.72A / .45Ω	.74A / .34Ω	.97A / .35Ω	1.40A / .35Ω
120 ±10%	Consult RCD	0.49A / .93Ω	0.48A / .54Ω	.66A / .48Ω	.69A / .40Ω	.89A / .40Ω	1.30A / .40Ω
150 ±10%	"	0.41A / 1.1Ω	0.40A / .75Ω	.58A / .68Ω	.61A / .54Ω	.78A / .47Ω	1.20A / .47Ω
180 ±10%	"	0.38A / 1.37Ω	0.36A / 1.02Ω	.51A / .77Ω	.56A / .62Ω	.72A / .63Ω	1.00A / .63Ω
220 ±10%	"	0.35A / 1.57Ω	0.31A / 1.20Ω	.49A / .96Ω	.53A / .72Ω	.66A / .73Ω	.95A / .73Ω
270 ±10%	"	0.31A / 1.87Ω	0.29A / 1.31Ω	.42A / 1.11Ω	.45A / .95Ω	.57A / .97Ω	.90A / .97Ω
330 ±10%	"	0.28A / 2.30Ω	0.28A / 1.50Ω	.40A / 1.26Ω	.42A / 1.10Ω	.52A / 1.16Ω	.80A / 1.16Ω
390 ±10%	"	0.23A / 3.40Ω	0.22A / 2.47Ω	.36A / 1.77Ω	.38A / 1.24Ω	.48A / 1.30Ω	.75A / 1.30Ω
470 ±10%	"	0.20A / 4.50Ω	0.20A / 3.00Ω	.34A / 1.96Ω	.35A / 1.53Ω	.42A / 1.48Ω	.65A / 1.48Ω
560 ±10%	"	Consult RCD	Consult RCD	.30A / 2.22Ω	.32A / 1.90Ω	.33A / 1.90Ω	.60A / 1.90Ω
680 ±10%	"	"	"	.26A / 2.96Ω	.25A / 3.12Ω	.28A / 2.25Ω	.50A / 2.45Ω
820 ±10%	"	"	"	Consult RCD	.22A / 4.00Ω	.24A / 2.55Ω	.48A / 2.55Ω
1000 ±10%	"	"	"	"	.18A / 5.96Ω	.20A / 3.75Ω	.46A / 3.00Ω
1200 ±10%	"	"	"	"	Consult RCD	Consult RCD	.35A / 3.50Ω
1500 ±10%	"	"	"	"	"	"	.32A / 4.18Ω
2200 ±10%	"	"	"	"	"	"	.28A / 5.46Ω

<sup>1</sup> Option ER Military Screening: per Mil-C-15305 (Thermal Shock -25/+85°C, DCR, Inductance, Vis./Mechanical Insp) <sup>2</sup> Information on PIC7 is preliminary

### SPECIFICATIONS

- Standard Tol.: ≤27uH ±20% (10% avail), >27uH ±10% (5% avail)
- Inductance Test Frequency: 1KHz (high freq. testing avail.)
- Temperature Range: -40 to +105°C
- Temperature Rise: 20°C typical at rated current
- Derating: derate current rating by 5%/°C above 85°C
- Resistance to Soldering Heat: 260°C for 10 Sec
- Rated Current lowers inductance approximately 10%

### P/N DESIGNATION:

**PIC1** □ - **1R8** - **M** **T** **W**

RCD Type \_\_\_\_\_

Option Codes: ER, 63, etc (leave blank if std)

Inductance (uH): 2 signif. digits & multiplier (R68=.68uH, 1R0=1uH, 100=10uH, 101=100uH, 102=1000uH)

Tolerance Code: M=20%, W=15% K=10%, J=5%

Packaging: T= Tape & Reel \_\_\_\_\_

Termination: W= Pb-free (std), Q= SnPb (leave blank if either is acceptable)