

HEI's high-power aluminum housed resistors use centerless ground ceramic cores for uniform heat distribution. Molded in a special high temperature material and mounted in an extruded aluminum finned housing, these designs provide maximum power dissipation and reliability. They have tinmed copperlead leads for solderability and meet or exceed MIL-R-18546, including "N" characteristic, and MIL-R-39009. **Specifications:** • Power Rating: Based on full power operation at 25°C, and maximum hotspot 275°C • Mounting on proper heat sink as follows: For 5 and 10 Watt – use 4" x 6" x 2" x .040" (101.60 x 152.40 x 50.80 x 1.02mm) aluminum chassis; For 25 and 50 Watt – use 5" x 7" x 2" x .040" (127.00 x 177.80 x 50.80 x 1.02mm) aluminum chassis

Electrical Specifications:

Series	TMC-5	TMC-10	TMC-25	TMC-50
MIL-R-39009/MIL-R-18546	RE-60/RE-60	RE-65/RE-65	RE-70/RE-70	RE-75/RE-75
HEI Power	7.5 Watts	12.5 Watts	25 Watts	50 Watts
MIL Power	5 Watts	10 Watts	20 Watts	30 Watts
Working Voltage	160	265	550	1250
Dielectric Strength	1000VAC	1000VAC	2500VAC	2500VAC

Series	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	AWG	R
TMC-5	11.40	12.57	16.03	30.15	8.86	16.79	8.51	1.91	3.81	2.24	2.49	2.36	1.40	8.33	7.01	16	2.97	
TMC-10	14.40	16.00	19.84	36.50	11.30	20.70	10.54	2.16	5.08	2.62	2.49	2.97	2.31	9.50	8.71	12	4.37	
TMC-25	18.39	19.96	27.76	50.80	13.84	27.81	14.61	2.41	6.86	4.62	3.30	3.56	2.31	12.70	10.72	12	4.37	
TMC-50	39.83	21.56	50.77	72.21	16.00	29.34	16.00	2.41	7.87	5.23	3.30	3.56	2.31	12.70	11.51	12	4.37	

RESISTANCE VALUE CHART

TMC-5		TMC-10		TMC-25		TMC-50	
.10	25 2.0K	.20	33 330	.10	20 500	.15	1.5 8.0 40 300
.50	30 10.0K	1.0	35 1.0K	1.0	25 1.0K	.20	2.0 10 50 500
1.0	100 15.0K	2.0	50 2.0K	2.0	40 2.0K	.25	2.5 12 75 1.0K
5.0	150	2.5	75 2.5K	3.0	100 3.0K	.30	3.3 16 100 1.5K
10	300	10	100 10.0K	12	200	.50	5.0 20 150 2.5K
12	390	25	300	15	300	1.0	6.0 30 250 5.0K

Resistance Range (Ω)	Wattage	Digi-Key Part No.\$	Price Each					Huntington Part No.
			1	10	50	100	250	
.10-15.0K	5	TMC5-(Value)-ND	4.39	3.75	3.09	2.64	2.43	TMC-5-(Value)-1%
.20-10.0K	10	TMC10-(Value)-ND	3.73	3.18	2.60	2.24	2.06	TMC-10-(Value)-1%
.10-3.0K	25	TMC25-(Value)-ND	5.23	4.46	3.66	3.14	2.89	TMC-25-(Value)-1%
.15-5.0K	50	TMC50-(Value)-ND	5.47	4.66	3.83	3.29	3.02	TMC-50-(Value)-1%

\$ For complete part number, substitute Digi-Key value (from Resistance Value Chart) for (Value).

CTS Thick Film Current Sensing Resistors – 73xx Series

Features: • Thick film construction • Very low resistance • Surface mount package • Suitable for current limiting, current detection, motor control, power supply and hard disk drives • High precision and excellent accuracy for current detection • Good electrical characteristics • Suitable for reflow soldering



73L1 and 73L2 Series Resistance Value Charts		73L3, 73L4, 73L5, 73L6, and 73L7 Series Resistance Value Charts		73E4 and 73E6 Series Resistance Value Charts	
Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)	Value (Code)
.20 (R20)	.56 (R56)	.10 (R10)	.56 (R56)	.050 (R050)	.062 (R062)
.47 (R47)	.91 (R91)	.20 (R20)	.91 (R91)	.056 (R056)	.091 (R091)
		.47 (R47)			

Series	Package Code Inch (mm)	Dimensions (mm)			
		L	W	d	t
73L1	0402 (1005)	1.00 ± 0.05	0.50 ± 0.03	0.25 ± 0.10	0.35 ± 0.05
73L2	0603 (1608)	1.60 ± 0.15	0.80 +0.20/-0.10	0.25 ± 0.20	0.50 +0.15/-0.05
73L3	0805 (2012)	2.00 +0.20/-0.10	1.25 +0.10/-0.10	0.40 ± 0.20	0.50 +0.15/-0.05
73L4	1206 (3216)	3.20 +0.10/-0.15	1.60 +0.10/-0.15	0.50 ± 0.20	0.55 +0.15/-0.05
73L5	1210 (3225)	3.20 +0.10/-0.15	2.60 +0.10/-0.15	0.50 ± 0.20	0.55 +0.15/-0.05
73L6	2010 (5025)	5.00 ± 0.15	2.50 ± 0.15	0.60 ± 0.25	0.56 ± 0.15
73L7	2512 (6432)	6.30 ± 0.15	3.20 ± 0.15	0.60 ± 0.25	0.56 ± 0.15
73E4	1206 (3216)	3.20 ± 0.10	1.60 ± 0.10	0.50 ± 0.20	0.55 ± 0.10
73E6	2010 (5024)	5.00 ± 0.15	2.50 ± 0.15	0.60 ± 0.25	0.55 ± 0.15

Series	Package Size Inch (mm)	Wattage	Value Range (Ω)	TCR ppm/°C	Resistance Tolerance	Digi-Key Part No.\$	Cut Tape Pricing			Digi-Key Part No.\$	Tape & Reel Pricing			
							50	200	4,000		5,000	10,000	12,000	
73L1	0402 (1005)	1/10	0.20 - 0.91	±300	±5%	73L1(Code)JCT-ND	1.24	3.33	7.65	73L1(Code)JTR-ND	—	—	9.00/M	—
73L2	0603 (1608)	1/10	0.20 - 0.91	±300	±5%	73L2(Code)JCT-ND	1.24	3.33	7.65	73L2(Code)JTR-ND	—	10.00/M	9.00/M	—
73L3	0805 (2012)	1/8	0.10 - 0.91	±200	±5%	73L3(Code)JCT-ND	1.10	2.96	6.80	73L3(Code)JTR-ND	—	8.00/M	7.00/M	—
73L4	1206 (3216)	1/4	0.10 - 0.91	±200	±5%	73L4(Code)JCT-ND	1.24	3.33	7.65	73L4(Code)JTR-ND	—	10.00/M	9.00/M	—
73L5	1210 (3225)	1/2	0.10 - 0.91	±200	±5%	73L5(Code)JCT-ND	1.93	5.18	11.90	73L5(Code)JTR-ND	—	18.00/M	17.00/M	—
73L6	2010 (5025)	3/4	0.10 - 0.91	±200	±5%	73L6(Code)JCT-ND	3.16	8.51	19.55	73L6(Code)JTR-ND	30.00/M	—	—	29.00/M
73L7	2512 (6432)	1.0	0.10 - 0.91	±200	±5%	73L7(Code)JCT-ND	5.36	14.43	33.15	73L7(Code)JTR-ND	56.00/M	—	—	53.00/M
73E4	1206 (3216)	1/2	0.050 - 0.091	±100	±5%	73E4(Code)JCT-ND	4.40	11.84	27.20	73E4(Code)JTR-ND	—	45.00/M	—	—
73E6	2010 (5024)	1.0	0.050 - 0.091	±100	±5%	73E6(Code)JCT-ND	12.10	32.56	74.80	73E6(Code)JTR-ND	134.00/M	—	—	126.00/M

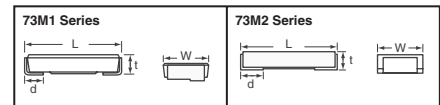
\$ For complete part number, substitute the corresponding code from the Resistance Values chart for (Code).

Metal Plate Current Sensing Resistors – 73Mx Series

Features: • Very low resistance • Surface mount package • Suitable for current limiting, current detection, motor control, power supply and hard disk drives • High precision and excellent accuracy for current detection • Good electrical characteristics • Suitable for reflow solder process

Series	Dimensions (mm)			
	L	W	t	d
73M1	6.2±0.3	3.1±0.2	1.0±0.2	1.2±0.3
73M2	6.4±0.3	3.5±0.2	1.2 max.	1.0±0.2

73M1 Series Resistance Value Chart		73M2 Series Resistance Value Chart	
Value (Code)	Value (Code)	Value (Code)	Value (Code)
.003 (R003)	.008 (R008)	.005 (R005)	.010 (R010)
.004 (R004)	.009 (R009)	.006 (R006)	.020 (R020)
.005 (R005)	.010 (R010)	.007 (R007)	.030 (R030)
.006 (R006)	.047 (R047)	.008 (R008)	.040 (R040)
.007 (R007)	.100 (R100)	.009 (R009)	



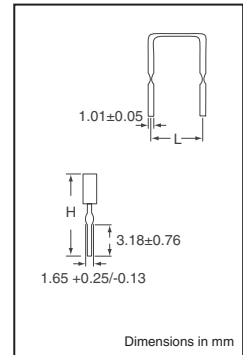
Series	Package Size (Inch)	Wattage	Value Range (Ω)	Resistance Tolerance	Digi-Key Part No.\$	Cut Tape Pricing			Digi-Key Part No.\$	Tape & Reel Pricing	
						10	200	4,000		1,000	5,000
73M1	2412	1.0	0.003 - 0.009	±1%	73M1(Code)FCT-ND	17.46	46.99	107.95	73M1(Code)FTR-ND	221.00	209.00/M
			0.010 - 0.100		73M1(Code)FCT-ND	17.33	46.62	107.10	73M1(Code)FTR-ND	220.00	207.00/M
73M2	2514	2.0	0.005 - 0.009	±1%	73M2(Code)FCT-ND	36.99	99.53	228.65	73M2(Code)FTR-ND	477.00	451.00/M
			0.010 - 0.040		73M2(Code)FCT-ND	36.85	99.16	227.80	73M2(Code)FTR-ND	475.00	449.00/M

\$ For complete part number, substitute the corresponding code from the Resistance Values chart for (Code).

PWR4412-2S Series — Bare Metal Element Resistor

The PWR4412-2S Series is a through hole resistor designed for current shunt and current sensing applications such as power supplies of different kinds, motor drives and many other applications. The resistor is quite rugged, consisting of a special metal alloy welded to tinned copper leads. **Features:** • High current capability • Low inductance • Radial leads • Low ohmic Electrical Specifications: • Temperature Coefficient (TCR): -65°C<T<170°C ±20 PPM/°C • Operating Temperature: -40°C - 125°C • Inductance: 10nH

Version	Resistance Ω	Tolerance %	Wattage @ 85°C	Dimensions (mm)		Digi-Key Part No.	Price Each			Bourns Part No.
				L	H		1	10	50	
B	.01	1	1.0	11.43+1.02/-0.51	5.08±2.54	PWR4412-2SBR0100F-ND	.96	.88	.76	PWR4412-2SBR0100F
	.03	5				PWR4412-2SBR0100J-ND	.96	.88	.76	PWR4412-2SBR0100J
	.03	5				PWR4412-2SBR0300F-ND	.96	.88	.76	PWR4412-2SBR0300F
C	.01	1	3.0	15.24+1.02/-0.51	25.4 Max.	PWR4412-2SCR0100F-ND	.96	.88	.76	PWR4412-2SCR0100F
	.03	5				PWR4412-2SCR0100J-ND	.96	.88	.76	PWR4412-2SCR0100J
	.03	5				PWR4412-2SCR0300F-ND	.96	.88	.76	PWR4412-2SCR0300F
D	.01	1	5.0	20.32+1.02/-0.51	25.4 Max.	PWR4412-2SDR0100F-ND	.96	.88	.76	PWR4412-2SDR0100F
	.03	5				PWR4412-2SDR0100J-ND	.96	.88	.76	PWR4412-2SDR0100J
	.03	5				PWR4412-2SDR0300F-ND	.96	.88	.76	PWR4412-2SDR0300F



Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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