imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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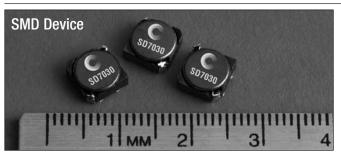
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Low-Profile Shielded Drum Inductors

SD7030 Series

COILTRONICS[®]



Description

- 125°C maximum total operating temperature
- Low profile 7.0 x 7.0 x 3.0mm maximum surface mount package
- Ferrite material shielded drum core
- Inductance range from 1.5µH to 680µH
- Current range from 0.21 to 5.5 Amps
- Frequency range up to 1MHz

Applications

- Notebook computers
- TFT LCD Bias supplies
- Handheld instruments
- Battery power, Li-Ion, 2-cell
- White LED driver

Environmental Data

- Storage temperature range: -40°C to +125°C
- Operating temperature range: -40°C to +125°C (ambient plus self-temperature rise)
- Solder reflow temperature: J-STD-020D compliant

Packaging

• Supplied in tape and reel packaging, 1500 parts per 13" diameter. reel

Wireless handsets

• Digital still camera

• ADSL/DSL/Cable modems

· Buck and boost inductor

GPS Receivers

RoHS

Unthefe OCL ¹ µH ± 30% I _{mm} ² Amps Typ. DCR m2 @ 25°C Max DCR m2 @ 25°C K-f 7/7030-185.R 1.5 5.5 4.5 10 12 12 7/7030-185.R 3.3 3.7 3.00 20 24 1 7/7030-382.R 3.3 3.7 3.00 20 24 1 7/7030-783.R 4.1 3.4 2.60 22 27 1 7/7030-783.R 7.0 2.3 2.10 45 54 1 1 7/7030-783.R 1.0.0 2.1 1.70 54 65 1 1 1 7/7030-100.R 11.6 1.1.7 1.40 70 84 1 1 1 1 1<	Product Specifications						
17030-185-R 1.5 5.5 4.5 10 12 17030-185-R 07030-383-R 3.3 3.7 3.00 20 24 17030-780-R 07030-389-R 4.1 3.4 2.60 22 27 07030-580-R 4.9 3.2 2.40 26 31 07030-787-R 7.0 2.3 2.10 45 54 07030-700-R 10.0 2.1 1.70 54 65 70 07030-10-R 11.5 1.9 1.55 58 70 170 07030-10-R 14.6 1.7 1.40 70 84 170 07030-20-R 21.0 1.4 1.20 107 128 17030-300-R 07030-300-R 30.0 <	Part Number⁵	$0CL^{1} \mu H \pm 30\%$	I _{rms²} Amps			Max DCR m Ω @ 25°C	K-factor 4
V7030-389-R 4.1 3.4 2.60 22 27 V7030-5R0-R 4.9 3.2 2.40 26 31 V7030-5R0-R 5.8 2.8 2.25 29 35 V7030-7R3-R 7.0 2.3 2.10 45 54 V7030-7R3-R 7.0 2.3 2.10 45 54 V7030-7R3-R 7.0 2.3 2.10 45 54 V7030-7R3-R 7.0 2.3 2.11 1.70 54 65 V7030-100-R 10.0 2.1 1.70 54 65 70 V7030-120-R 11.5 1.9 1.55 58 70 70 V7030-180-R 14.6 1.7 1.40 70 84 70 V7030-220-R 21.0 1.4 1.20 107 128 70 V7030-260-R 24.9 1.3 1.05 118 142 70 V7030-300-R 30.0 1.2	SD7030-1R5-R	1.5			10	12	32
97030-5R0-R 4.9 3.2 2.40 26 31 97030-6R0-R 5.8 2.8 2.25 29 35 97030-7R3-R 7.0 2.3 2.10 45 54 97030-R0-R 7.8 2.2 1.85 48 58 97030-100-R 10.0 2.1 1.70 54 65 97030-120-R 11.5 1.9 1.55 58 70 97030-120-R 11.6 1.7 1.40 70 84 97030-120-R 14.6 1.7 1.40 70 84 97030-120-R 14.6 1.7 1.32 79 95 97030-220-R 21.0 1.4 1.20 107 128 97030-260-R 24.9 1.3 1.05 118 142 97030-300-R 30.0 1.2 0.97 138 165 97030-300-R 39.7 1.1 0.86 175 210 97030-420-R 54	SD7030-3R3-R	3.3	3.7	3.00	20	24	22
57030-6R0-R 5.8 2.8 2.25 29 35 77030-7R3-R 7.0 2.3 2.10 45 54 77030-7R3-R 7.8 2.2 1.85 48 58 77030-100-R 10.0 2.1 1.70 54 65 77030-120-R 11.5 1.9 1.55 58 70 77030-150-R 14.6 1.7 1.40 70 84 77030-150-R 14.6 1.7 1.32 79 95 77030-202-R 21.0 1.4 1.20 107 128 77030-202-R 21.0 1.4 1.20 107 128 77030-204-R 30.0 1.2 0.97 138 165 77030-404-R 43.4 1.1 0.86 175 210 77030-560-R 54.4 0.99 0.73 231 277 77030-680-R 66.6 0.85 0.65 253 304 77030-61R	SD7030-3R9-R	4.1	3.4	2.60	22	27	19
77030-7R3-R 7.0 2.3 2.10 45 54 77030-880-R 7.8 2.2 1.85 48 58 77030-100-R 10.0 2.1 1.70 54 65 77030-120-R 11.5 1.9 1.55 58 70 77030-150-R 14.6 1.7 1.40 70 84 77030-150-R 14.6 1.7 1.30 79 95 77030-200-R 21.0 1.4 1.20 107 128 77030-200-R 24.9 1.3 1.05 118 142 77030-200-R 30.0 1.2 0.97 138 165 77030-300-R 30.0 1.2 0.97 138 165 77030-300-R 66.6 0.85 0.65 253 304 77030-660-R 54.4 0.99 0.73 231 277 77030-680-R 66.6 0.85 0.65 253 304 77030-620-R	SD7030-5R0-R	4.9	3.2	2.40	26	31	17
77030-880-R 7.8 2.2 1.85 48 58 77030-100-R 10.0 2.1 1.70 54 65 77030-120-R 11.5 1.9 1.55 58 70 77030-150-R 14.6 1.7 1.40 70 84 77030-150-R 14.6 1.7 1.32 79 95 77030-20-R 21.0 1.4 1.20 107 128 77030-20-R 21.0 1.4 1.20 107 128 77030-300-R 30.0 1.2 0.97 138 165 77030-300-R 30.0 1.2 0.97 138 165 77030-300-R 30.0 1.2 0.97 138 165 77030-40-R 43.4 1.1 0.86 175 210 77030-60-R 54.4 0.99 0.73 231 277 277 77030-60-R 81.4 0.82 0.60 325 390 304	SD7030-6R0-R	5.8	2.8	2.25	29	35	16
97030-100-R 10.0 2.1 1.70 54 65 97030-120-R 11.5 1.9 1.55 58 70 97030-120-R 11.6 1.7 1.40 70 84 97030-180-R 17.3 1.7 1.32 79 95 97030-220-R 21.0 1.4 1.20 107 128 97030-220-R 21.0 1.4 1.20 107 128 97030-200-R 24.9 1.3 1.05 118 142 97030-300-R 30.0 1.2 0.97 138 165 97030-400-R 43.4 1.1 0.86 175 210 97030-440-R 43.4 1.1 0.80 198 238 97030-460-R 66.6 0.85 0.65 253 304 97030-680-R 66.6 0.85 0.65 253 390 97030-101-R 95.5 0.70 0.54 446 535 97030-121-R </td <td>SD7030-7R3-R</td> <td>7.0</td> <td>2.3</td> <td>2.10</td> <td>45</td> <td>54</td> <td>13</td>	SD7030-7R3-R	7.0	2.3	2.10	45	54	13
11.5 1.9 1.55 58 70 7030-150-R 14.6 1.7 1.40 70 84 7030-150-R 14.6 1.7 1.40 70 84 7030-150-R 14.6 1.7 1.32 79 95 7030-220-R 21.0 1.4 1.20 107 128 7030-260-R 24.9 1.3 1.05 118 142 7030-300-R 30.0 1.2 0.97 138 165 7030-300-R 39.7 1.1 0.86 175 210 7030-300-R 39.7 1.1 0.86 175 210 7030-440-R 43.4 1.1 0.80 198 238 7030-680-R 66.6 0.85 0.65 253 304 7030-680-R 66.6 0.85 0.65 253 304 7030-680-R 81.4 0.82 0.60 325 390 7030-101-R 95.5 0.70	SD7030-8R0-R	7.8	2.2	1.85	48	58	12
97030-150-R 14.6 1.7 1.40 70 84 97030-180-R 17.3 1.7 1.32 79 95 97030-220-R 21.0 1.4 1.20 107 128 97030-260-R 24.9 1.3 1.05 118 142 97030-260-R 24.9 1.3 1.05 118 142 97030-300-R 30.0 1.2 0.97 138 165 97030-390-R 39.7 1.1 0.86 175 210 97030-440-R 43.4 1.1 0.86 175 210 97030-560-R 54.4 0.99 0.73 231 277 97030-680-R 66.6 0.85 0.65 253 304 97030-101-R 95.5 0.70 0.54 446 535 97030-121-R 115.2 0.67 0.50 629 755 97030-121-R 145 0.57 0.44 715 858 97030-1	SD7030-100-R	10.0	2.1	1.70	54	65	11
17.30-180-R 17.3 1.7 1.32 79 95 07030-220-R 21.0 1.4 1.20 107 128 07030-260-R 24.9 1.3 1.05 118 142 07030-300-R 30.0 1.2 0.97 138 165 07030-390-R 39.7 1.1 0.86 175 210 07030-440-R 43.4 1.1 0.80 198 238 07030-560-R 54.4 0.99 0.73 231 277 07030-680-R 66.6 0.85 0.65 253 304 07030-680-R 66.6 0.85 0.65 253 304 07030-680-R 61.4 0.82 0.60 325 390 304 07030-101-R 95.5 0.70 0.54 446 535 5 07030-111-R 115.2 0.67 0.50 629 755 5 07030-121-R 115.2 0.67 0.50 629	SD7030-120-R	11.5	1.9	1.55	58	70	10
D7030-220-R 21.0 1.4 1.20 107 128 D7030-260-R 24.9 1.3 1.05 118 142 D7030-300-R 30.0 1.2 0.97 138 165 D7030-390-R 39.7 1.1 0.86 175 210 D7030-440-R 43.4 1.1 0.86 175 210 D7030-660-R 54.4 0.99 0.73 231 277 D7030-680-R 66.6 0.85 0.65 253 304 D7030-680-R 66.6 0.85 0.60 325 390 D7030-680-R 81.4 0.82 0.60 325 390 D7030-101-R 95.5 0.70 0.54 446 535 D7030-111-R 115.2 0.67 0.50 629 755 D7030-151-R 145 0.57 0.44 715 858 D7030-21-R 214 0.51 0.36 1102 1322	SD7030-150-R	14.6	1.7	1.40	70	84	9.3
D7030-260-R 24.9 1.3 1.05 118 142 D7030-300-R 30.0 1.2 0.97 138 165 D7030-390-R 39.7 1.1 0.86 175 210 D7030-440-R 43.4 1.1 0.80 198 238 D7030-560-R 54.4 0.99 0.73 231 277 D7030-680-R 66.6 0.85 0.65 253 304 D7030-820-R 81.4 0.82 0.60 325 390 D7030-101-R 95.5 0.70 0.54 446 535 D7030-112-R 115.2 0.67 0.50 629 755 D7030-111-R 95.5 0.70 0.54 446 535 D7030-112-R 115.2 0.67 0.50 629 755 D7030-151-R 145 0.57 0.44 715 858 107030-221-R D7030-21-R 211 0.51 0.36 1102 1322	SD7030-180-R	17.3	1.7	1.32	79	95	8.8
300-R 30.0 1.2 0.97 138 165 07030-390-R 39.7 1.1 0.86 175 210 07030-440-R 43.4 1.1 0.80 198 238 07030-560-R 54.4 0.99 0.73 231 277 07030-680-R 66.6 0.85 0.65 253 304 07030-820-R 81.4 0.82 0.60 325 390 07030-101-R 95.5 0.70 0.54 446 535 07030-11-R 95.5 0.70 0.54 446 535 07030-121-R 115.2 0.67 0.50 629 755 07030-131-R 145 0.57 0.44 715 858 07030-131-R 145 0.57 0.44 715 858 07030-21-R 211 0.51 0.36 1102 1322 07030-271-R 264 0.44 0.33 1259 1475 07030	SD7030-220-R	21.0	1.4	1.20	107	128	7.6
390-R 39.7 1.1 0.86 175 210 07030-390-R 43.4 1.1 0.80 198 238 07030-560-R 54.4 0.99 0.73 231 277 07030-680-R 66.6 0.85 0.65 253 304 07030-820-R 81.4 0.82 0.60 325 390 07030-101-R 95.5 0.70 0.54 446 535 07030-11-R 95.5 0.70 0.54 446 535 07030-11-R 95.5 0.70 0.54 446 535 07030-121-R 115.2 0.67 0.50 629 755 07030-151-R 145 0.57 0.44 715 858 07030-151-R 145 0.54 0.40 805 966 07030-221-R 211 0.51 0.36 1102 1322 07030-271-R 264 0.44 0.33 1259 1475 0703	SD7030-260-R	24.9	1.3	1.05	118	142	6.9
07030-440-R 43.4 1.1 0.80 198 238 07030-560-R 54.4 0.99 0.73 231 277 07030-680-R 66.6 0.85 0.65 253 304 07030-820-R 81.4 0.82 0.60 325 390 07030-101-R 95.5 0.70 0.54 446 535 07030-121-R 115.2 0.67 0.50 629 755 07030-151-R 145 0.57 0.44 715 858 07030-21-R 174 0.54 0.40 805 966 07030-221-R 211 0.51 0.36 1102 1322 07030-271-R 264 0.44 0.33 1259 1475 07030-331-R 317 0.38 0.30 1438 1725 07030-391-R 381 0.36 0.27 1857 2228 07030-391-R 381 0.36 0.27 1857 2228	SD7030-300-R	30.0	1.2	0.97	138	165	6.4
D7030-560-R 54.4 0.99 0.73 231 277 D7030-680-R 66.6 0.85 0.65 253 304 D7030-820-R 81.4 0.82 0.60 325 390 D7030-101-R 95.5 0.70 0.54 446 535 D7030-121-R 115.2 0.67 0.50 629 755 D7030-151-R 145 0.57 0.44 715 858 D7030-181-R 174 0.54 0.40 805 966 D7030-221-R 211 0.51 0.36 1102 1322 D7030-271-R 264 0.44 0.33 1259 1475 D7030-331-R 317 0.38 0.30 1438 1725 D7030-391-R 381 0.36 0.27 1857 2228 D7030-561-R 561.0 0.29 0.23 2857 3428	SD7030-390-R	39.7	1.1	0.86	175	210	5.7
07030-680-R 66.6 0.85 0.65 253 304 07030-820-R 81.4 0.82 0.60 325 390 07030-101-R 95.5 0.70 0.54 446 535 07030-121-R 115.2 0.67 0.50 629 755 07030-151-R 145 0.57 0.44 715 858 07030-181-R 174 0.54 0.40 805 966 07030-221-R 211 0.51 0.36 1102 1322 07030-271-R 264 0.44 0.33 1259 1475 07030-331-R 317 0.38 0.30 1438 1725 07030-391-R 381 0.36 0.27 1857 2228 07030-471-R 460 0.34 0.25 2150 2581 07030-561-R 561.0 0.29 0.23 2857 3428	SD7030-440-R	43.4	1.1	0.80	198	238	5.3
07030-820-R81.40.820.6032539007030-101-R95.50.700.5444653507030-121-R115.20.670.5062975507030-151-R1450.570.4471585807030-181-R1740.540.4080596607030-221-R2110.510.361102132207030-271-R2640.440.331259147507030-331-R3170.380.301438172507030-391-R3810.360.271857222807030-561-R561.00.290.2328573428	SD7030-560-R	54.4	0.99	0.73	231	277	4.9
07030-101-R95.50.700.5444653507030-121-R115.20.670.5062975507030-151-R1450.570.4471585807030-181-R1740.540.4080596607030-221-R2110.510.361102132207030-271-R2640.440.331259147507030-331-R3170.380.301438172507030-391-R3810.360.271857222807030-561-R561.00.290.2328573428	SD7030-680-R	66.6	0.85	0.65	253	304	4.3
07030-121-R115.20.670.5062975507030-151-R1450.570.4471585807030-151-R1740.540.4080596607030-221-R2110.510.361102132207030-271-R2640.440.331259147507030-331-R3170.380.301438172507030-391-R3810.360.271857222807030-561-R561.00.290.2328573428	SD7030-820-R	81.4	0.82	0.60	325	390	4.0
1450.570.4471585817030-151-R1740.540.4080596617030-181-R1740.540.4080596617030-221-R2110.510.361102132217030-271-R2640.440.331259147517030-331-R3170.380.301438172517030-391-R3810.360.271857222817030-471-R4600.340.252150258117030-561-R561.00.290.2328573428	SD7030-101-R	95.5	0.70	0.54	446	535	3.6
07030-181-R1740.540.4080596607030-221-R2110.510.361102132207030-271-R2640.440.331259147507030-331-R3170.380.301438172507030-391-R3810.360.271857222807030-471-R4600.340.252150258107030-561-R561.00.290.2328573428	SD7030-121-R	115.2	0.67	0.50	629	755	3.3
07030-221-R2110.510.361102132207030-271-R2640.440.331259147507030-331-R3170.380.301438172507030-391-R3810.360.271857222807030-471-R4600.340.252150258107030-561-R561.00.290.2328573428	SD7030-151-R	145	0.57	0.44	715	858	2.9
D7030-271-R2640.440.3312591475D7030-331-R3170.380.3014381725D7030-391-R3810.360.2718572228D7030-471-R4600.340.2521502581D7030-561-R561.00.290.2328573428	SD7030-181-R	174	0.54	0.40	805	966	2.7
07030-331-R3170.380.301438172507030-391-R3810.360.271857222807030-471-R4600.340.252150258107030-561-R561.00.290.2328573428	SD7030-221-R	211	0.51	0.36	1102	1322	2.4
07030-391-R 381 0.36 0.27 1857 2228 07030-471-R 460 0.34 0.25 2150 2581 07030-561-R 561.0 0.29 0.23 2857 3428	SD7030-271-R	264	0.44	0.33	1259	1475	2.2
07030-471-R 460 0.34 0.25 2150 2581 07030-561-R 561.0 0.29 0.23 2857 3428	SD7030-331-R	317	0.38	0.30	1438	1725	2.0
)7030-561-R 561.0 0.29 0.23 2857 3428	SD7030-391-R	381	0.36	0.27	1857	2228	1.8
	SD7030-471-R	460	0.34	0.25	2150	2581	1.7
17030-681-B 677.2 0.28 0.21 3206 3847	SD7030-561-R	561.0	0.29	0.23	2857	3428	1.5
	SD7030-681-R	677.2	0.28	0.21	3206	3847	1.4

1 Open Circuit Inductance Test Parameters: 100kHz, 0.1V, 0.0Adc.

2 I_{rms}: DC current for an approximate ∆T of 40°C without core loss. Derating is necessary for AC currents. PCB layout, trace thickness and width, air-flow, and proximity of other heat generating components will affect the temperature rise. It is recommended that the temperature of the part not exceed 125°C under worst case operating conditions verified in the end application.

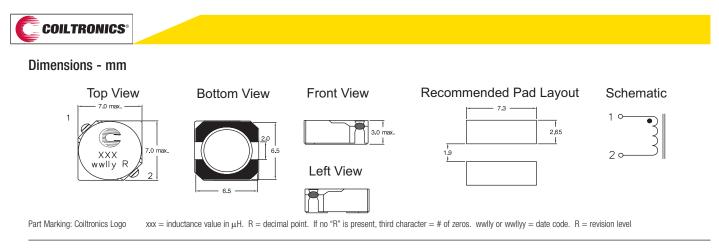
3 Isat Amps peak for approximately 35% rolloff (@25°C)



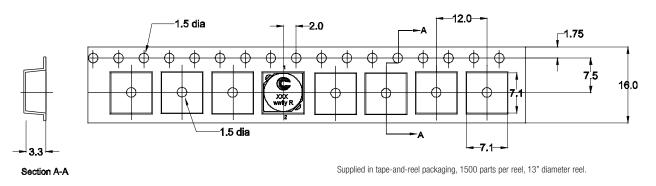
SD7030 = Product code and size; -xxx = Inductance value in μ H; R = decimal point; If no R is present, third character = # of zeros. -R suffix = RoHS compliant



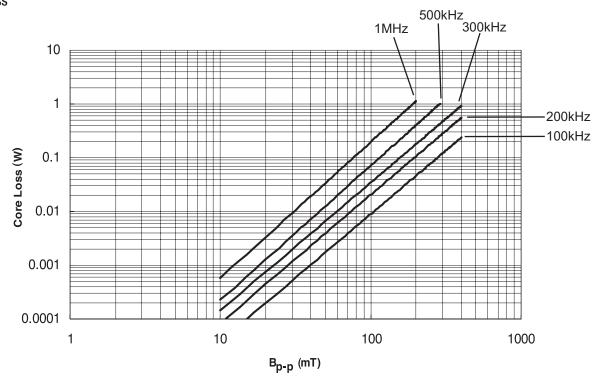
Data Sheet: 4330



Packaging Information - mm

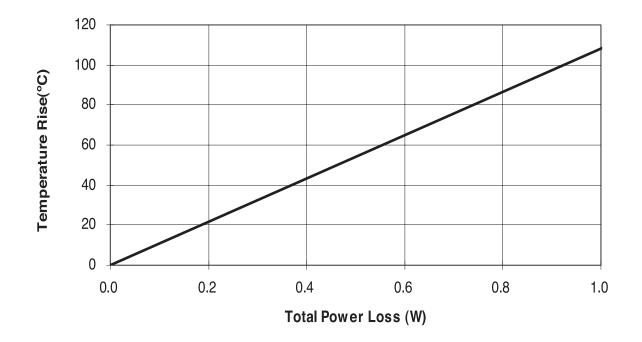


Core Loss



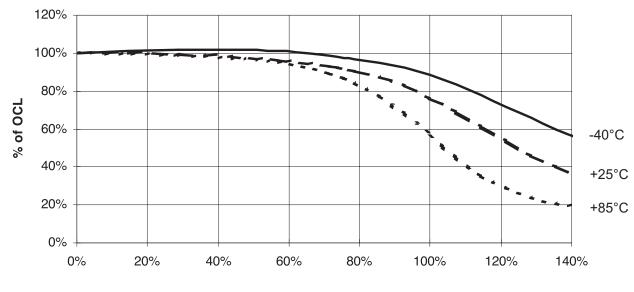


Temperature Rise vs. Loss



Inductance Characteristics

OCL Vs. I_{sat}









Solder Reflow Profile

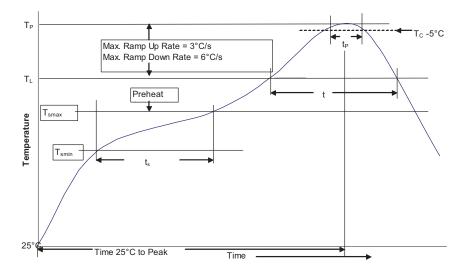


Table 1 - St	Table 1 - Standard SnPb Solder (T _C)				
	Volume	Volume			
Package	mm ³	mm ³			
Thickness	<350	≥350			
<2.5mm	235°C	220°C			
≥2.5mm	220°C	220°C			

Table 2 - Lead (Pb) Free Solder (T_c)

Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm ³ >2000
<1.6mm	260°C	260°C	260°C
1.6 – 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Reference JDEC J-STD-020D

Profile Feature		Standard SnPb Solder	Lead (Pb) Free Solder	
Preheat and Soak	 Temperature min. (T_{smin}) 	100°C	150°C	
	 Temperature max. (T_{smax}) 	150°C	200°C	
	 Time (T_{smin} to T_{smax}) (t_s) 	60-120 Seconds	60-120 Seconds	
Average ramp up rate T _{smax} to T _p		3°C/ Second Max.	3°C/ Second Max.	
Liquidous temperature (TL)		183°C	217°C	
Time at liquidous (t _L)		60-150 Seconds	60-150 Seconds	
Peak package body	temperature (T _P)*	Table 1	Table 2	
Time $(t_p)^{**}$ within 5 °C of the specified classification temperature (T_c)		20 Seconds**	30 Seconds**	
Average ramp-down rate (Tp to Tsmax)		6°C/ Second Max.	6°C/ Second Max.	
Time 25°C to Peak Temperature		6 Minutes Max.	8 Minutes Max.	

* Tolerance for peak profile temperature (T_{D}) is defined as a supplier minimum and a user maximum.

** Tolerance for time at peak profile temperature (tn) is defined as a supplier minimum and a user maximum.

 North America
 Cooper Electronic Technologies
 Cooper Bussmann

 1225 Broken Sound Parkway NW
 P.O. Box 14460
 P.O. Box 14460

 Suite F
 St. Louis, MO 63178-4460
 St. Louis, MO 63178-4460

 Boca Raton, FL 33487-3533
 Tel: 1-636-394-2877
 Tel: 1-636-394-2877

 Tel: 1-561-998-4100
 Fax: 1-636-527-1607
 Fax: 1-636-527-1607

 Fax: 1-561-241-6640
 Toll Free: 1-888-414-2645
 Fax: 1-636-527-1607

Europe

Cooper Electronic Technologies Cooper (UK) Limited Burton-on-the-Wolds Leicestershire • LE12 5TH UK Tel: +44 (0) 1509 882 737 Fax: +44 (0) 1509 882 786 Cooper Electronic Technologies Avda. Santa Eulalia, 290 08223 Terrassa, (Barcelona), Spain Tel: +34 937 362 812 +34 937 362 813 Fax: +34 937 362 719 Asia Pacific Cooper Electronic Technologies 1 Jalan Kilang Timor #06-01 Pacific Tech Centre Singapore 159303 Tel: +65 278 6151 Fax: +65 270 4160

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