Electrical characteristics

Amp Rating	% of Amp Rating	Opening Time
750mA-20A	100%	4 Hours, min
1-3A	200%	1-60 Seconds
1-5A	250%	5 Seconds, max
1-5A	300%	0.1-3 Seconds
750mA, 6-20A	350%	5 Seconds, max
750mA-20A	1000%	0.2-20mS

Environmental data

- Thermal Shock: MIL-STD-202, Method 107, Test Condition B
- Vibration: MIL-STD-202, Method 204, Test Condition C
- Moisture Resistance: MIL-STD-202, Method 106, 50 day cycle
- Solderability: ANSI/J-STD-002, Test B
- Normal ambient temperature: 23°C
- Operating temperature range -40°C to +125°C

Soldering method

- Wave Solder Immersion: 260°C, 10 seconds maximum.
- Solder Reflow: 260°C, 30 seconds maximum.

Specifications

Catalog Symbol	Current Rating (amps)	Voltage Rating (Vdc)	Interrupting Rating* (amps)	Resistance (Ω)** Typical	Typical Melt (I²t)† DC	Typical Voltage Drop (mV)‡	Alpha Marking
CC12H750mA	0.75	63	50	0.780	0.15	840	E
CC12H1A	1	63	50	0.470	0.18	490	H
CC12H1.5A	1.5	63	50	0.218	0.4	355	K
CC12H2A	2	63	50	0.133	1.1	305	N
CC12H2.5A	2.5	63	50	0.079	1.7	240	O
CC12H3A	3	63	50	0.049	2.2	185	P
CC12H3.5A	3.5	63	50	0.037	2.7	180	R
CC12H4A	4	63	50	0.033	3.2	169	S
CC12H4.5A	4.5	32	100	0.028	4.2	160	X
CC12H5A	5	32	100	0.023	6.0	140	T
CC12H6A	6	32	100	0.0155	8.0	140	F
CC12H7A	7	32	100	0.011	9.0	120	J
CC12H8A	8	32	100	0.007	12.0	80	M
CC12H10A	10	32	100	0.0065	33	90	U
CC12H12A	12	32	100	0.0045	45	80	W
CC12H15A	15	32	100	0.0030	40	70	Y
CC12H20A	20	32	100	0.0020	50	60	Q

* DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)

** DC Cold Resistance (Measured at 10% of rated current)

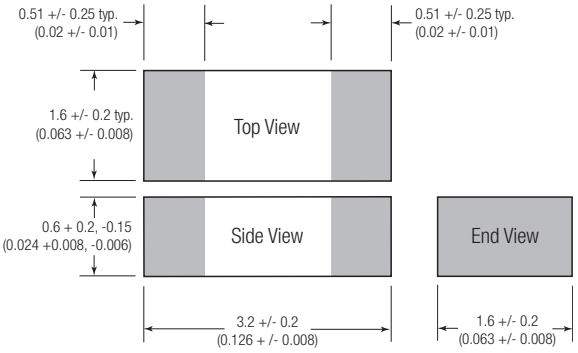
† Typical Melting I²t (Measured with a battery bank at rated DC voltage, 10x-rated current, not to exceed interrupting rating, time constant of calibrated circuit less than 50 microseconds)

‡ Typical Voltage Drop (Measured at rated current after temperature stabilizes)

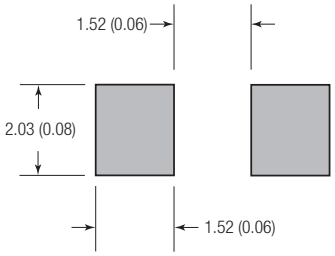
Device designed to carry rated current for four hours minimum. An operating current of 80% or less of rated current is recommended, with further derating required at elevated ambient temperatures.

Dimensions - mm (in)

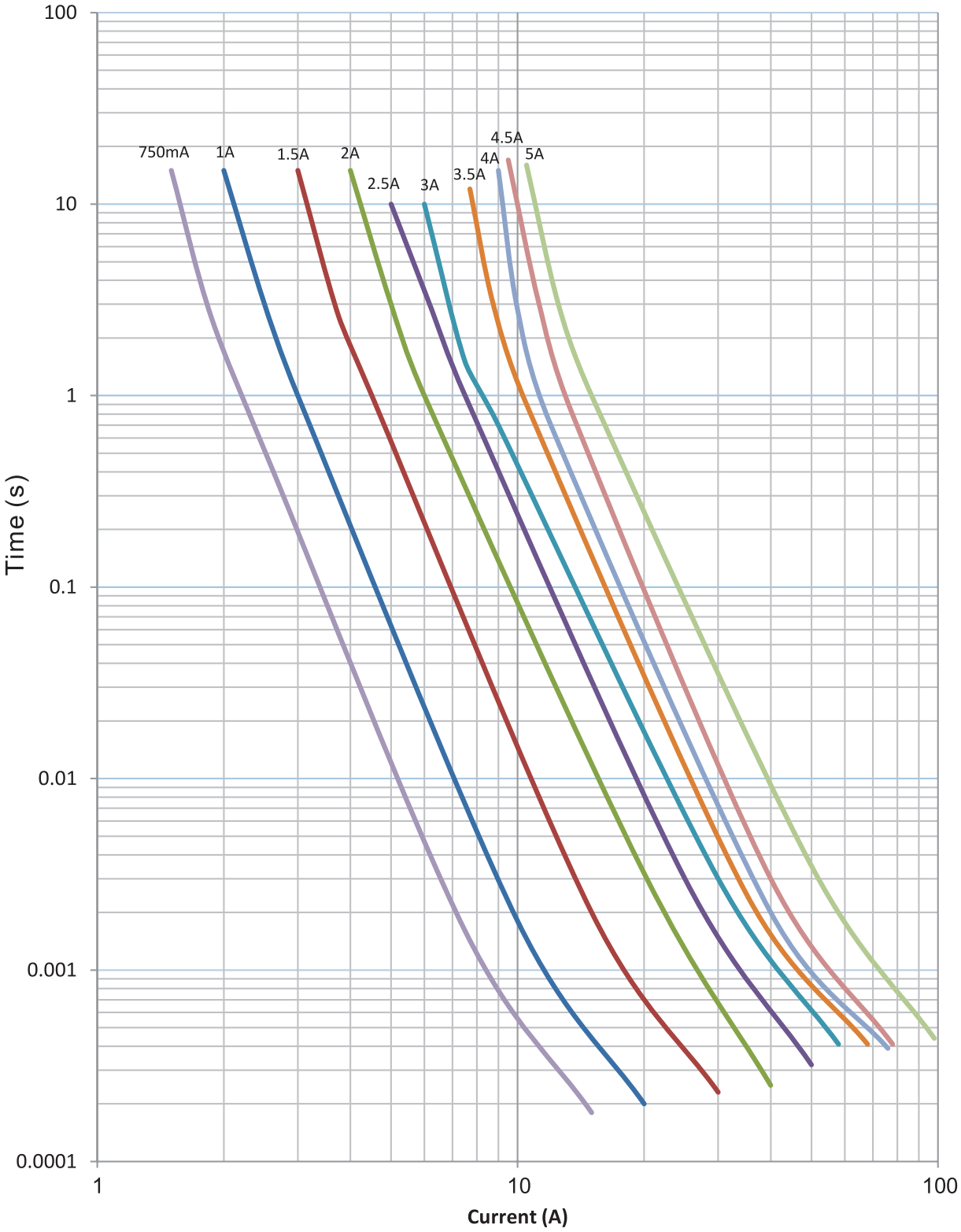
Drawing not to scale.



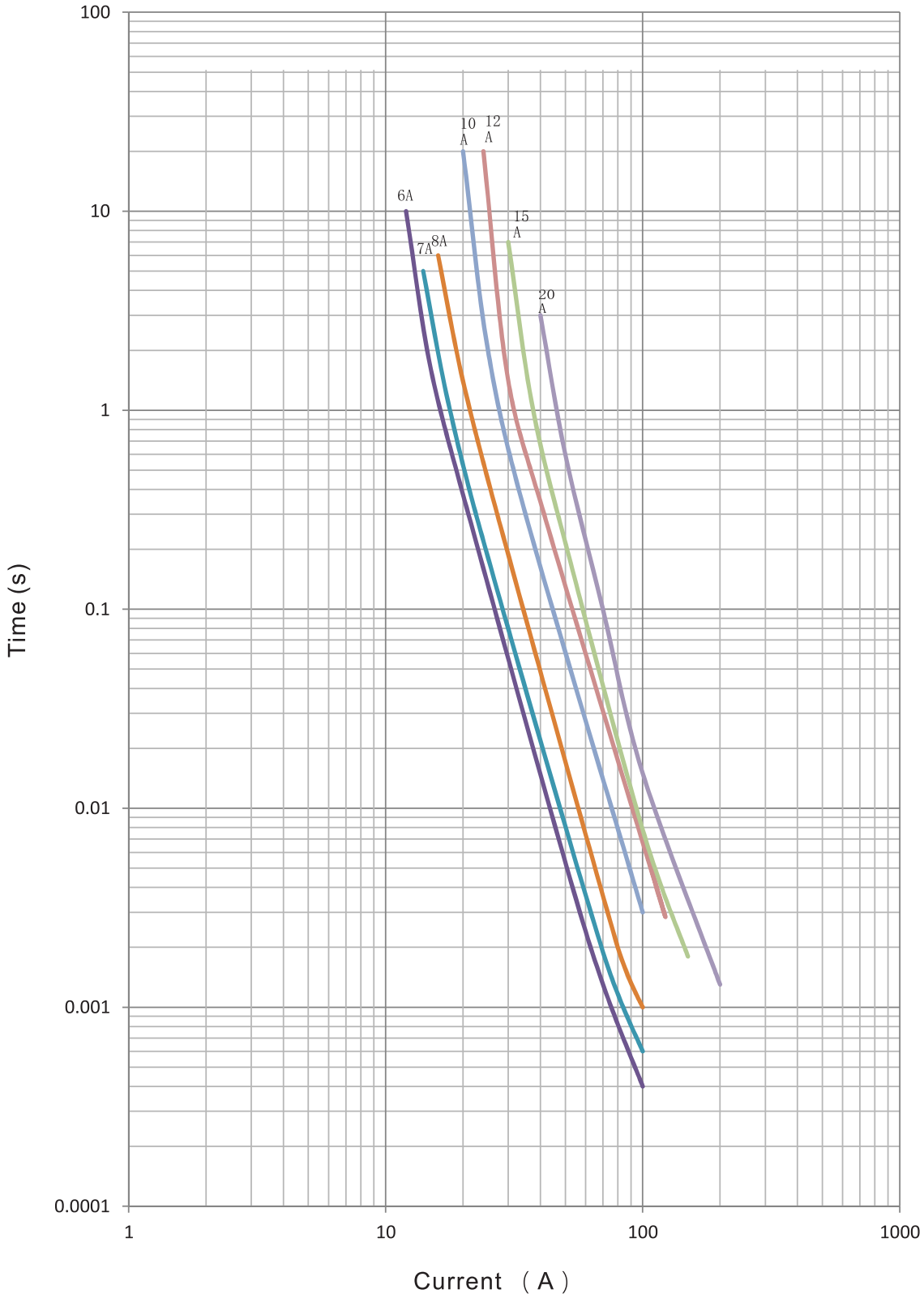
Pad layout



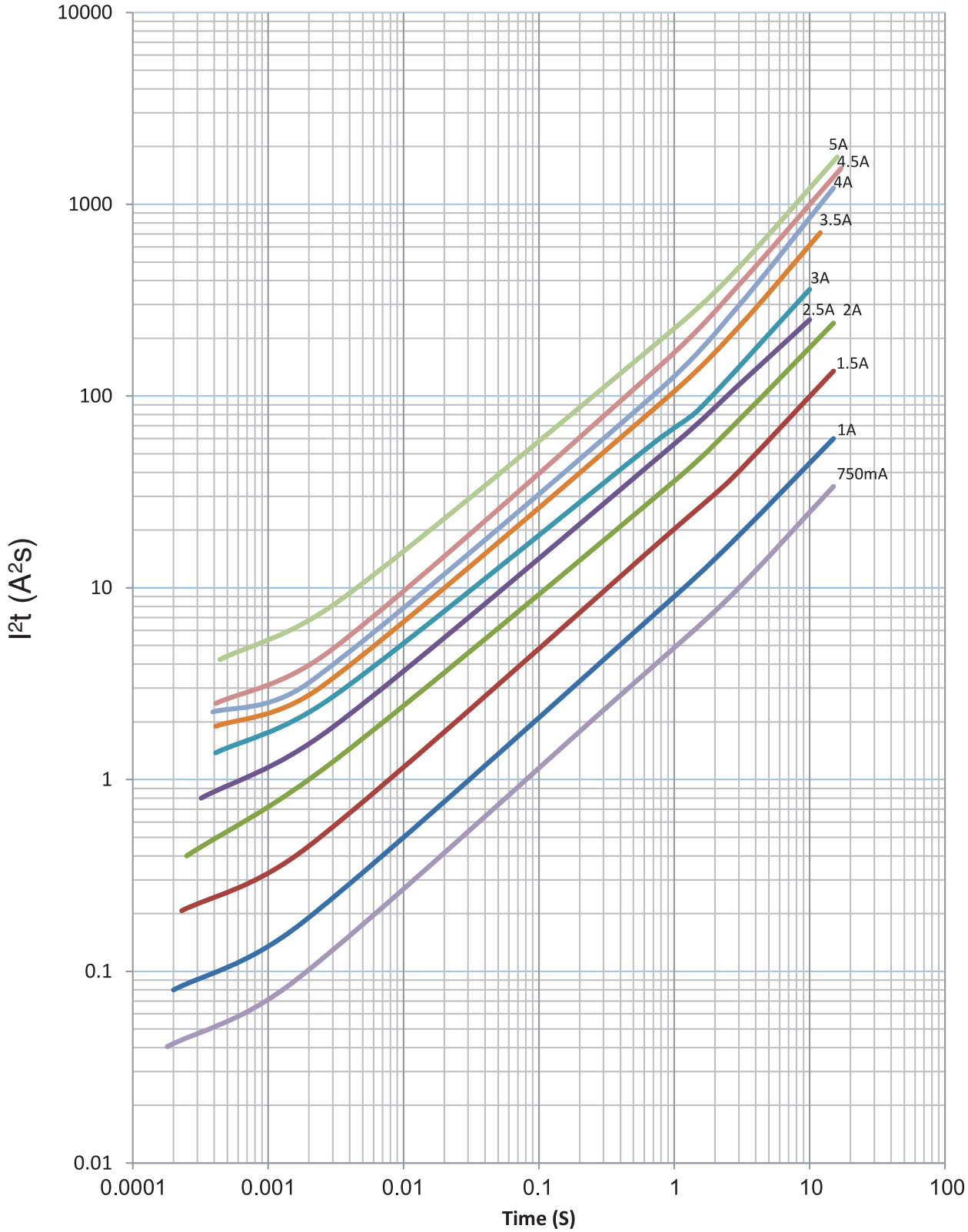
Time-current curves — 750mA-5A average melt



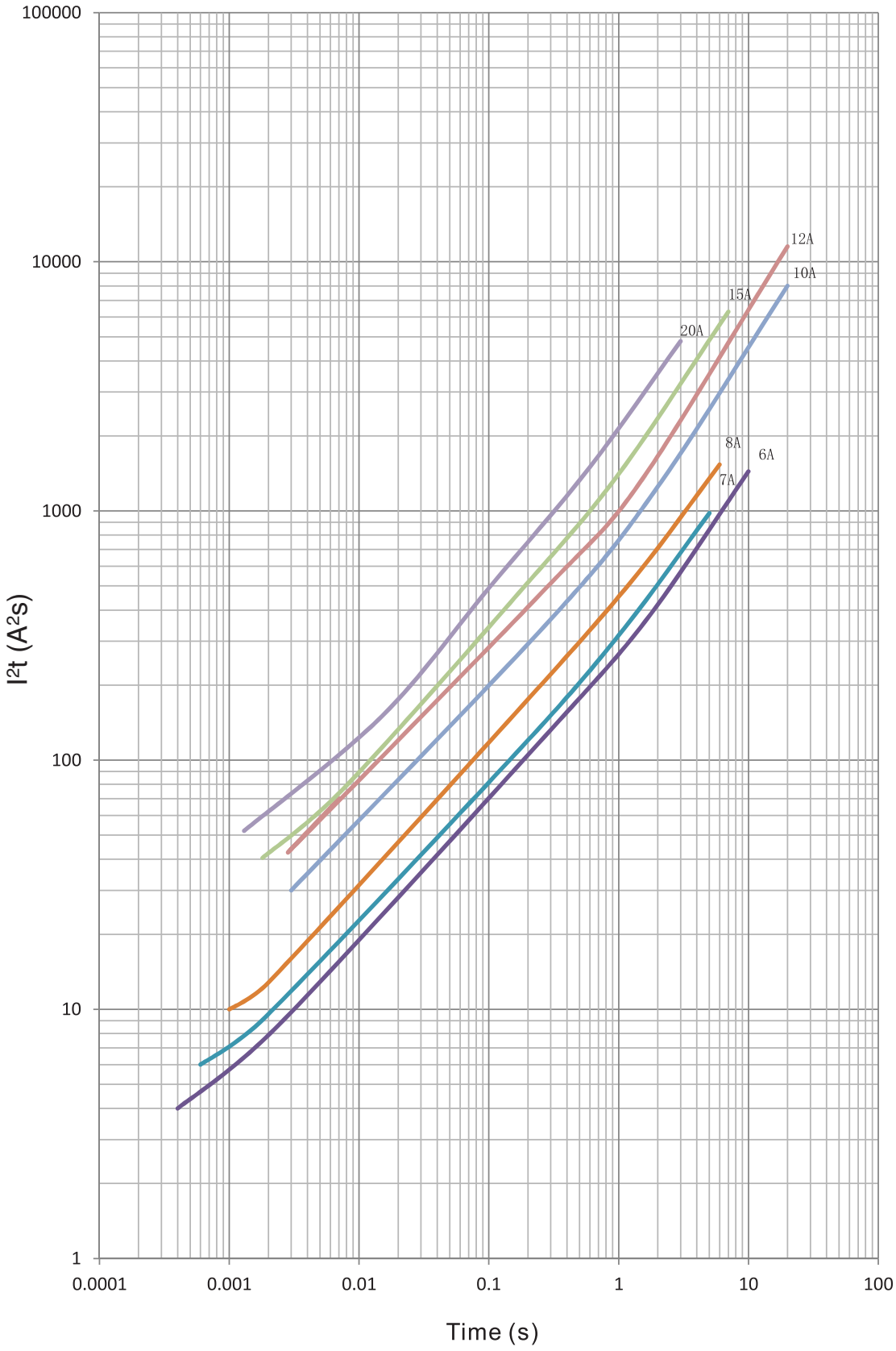
Time-current curves — 6A-20A average melt



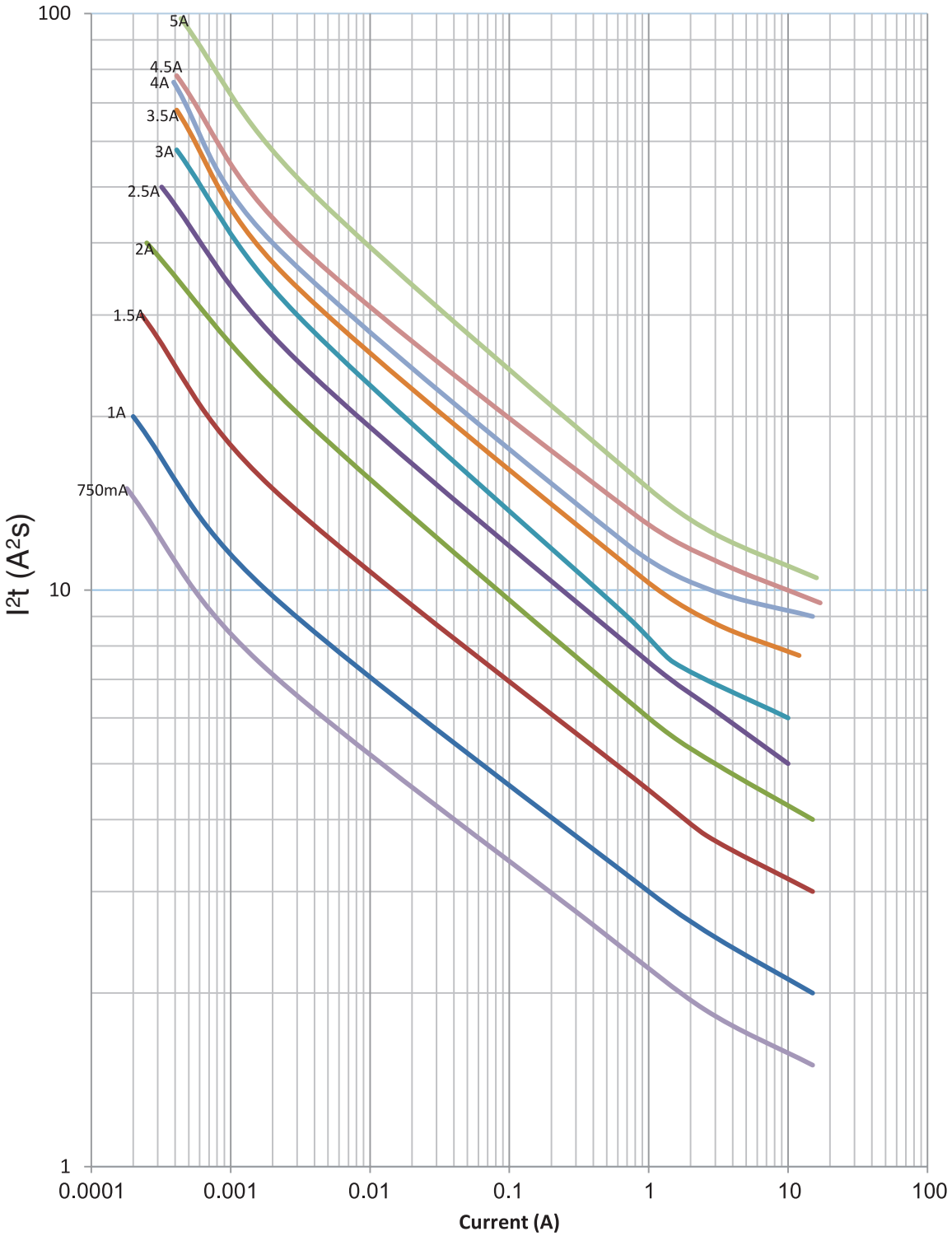
I²t vs. time curves — 750mA-5A



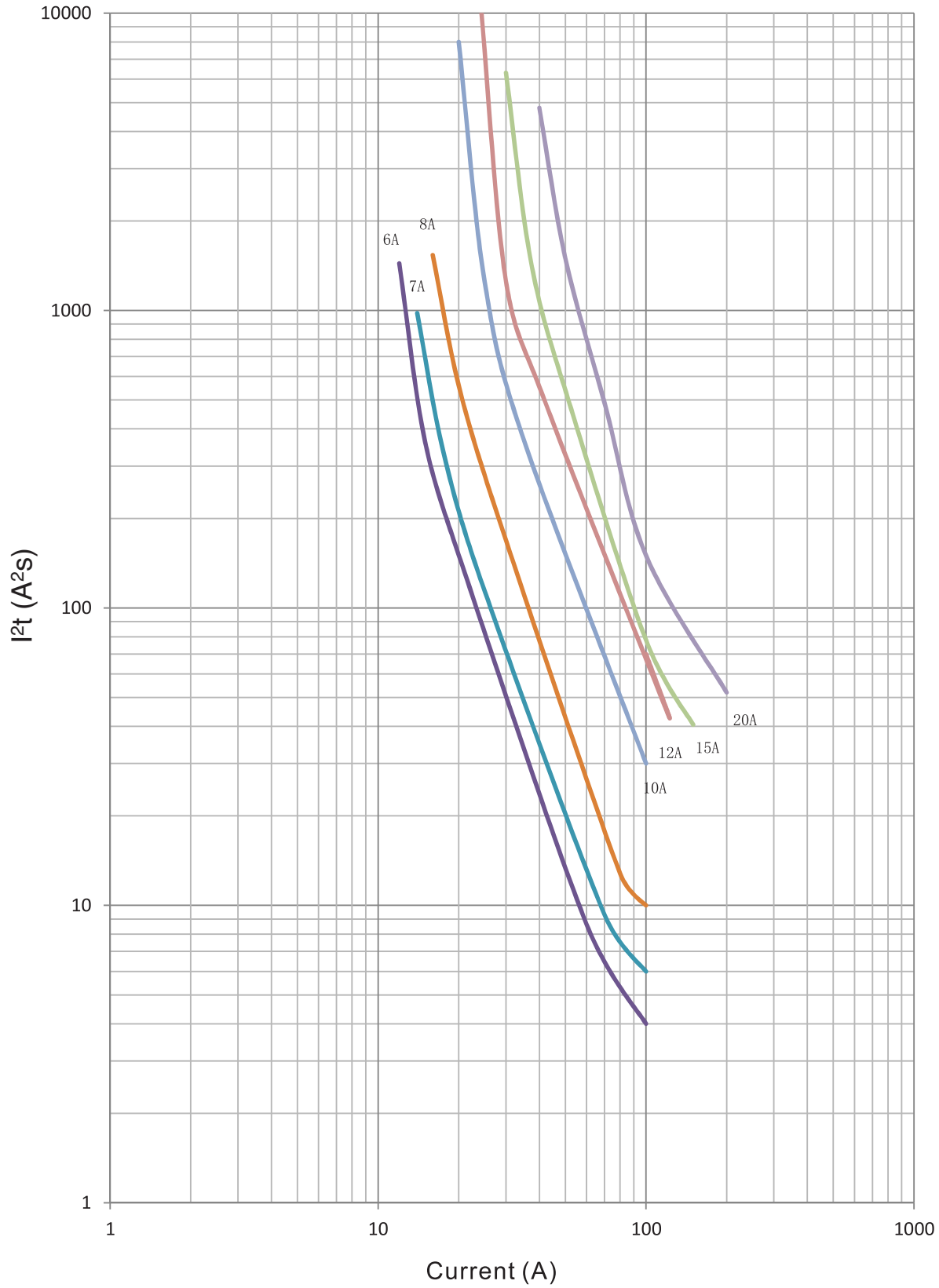
I²t vs. time curves — 6A-20A



I²t vs. current curves — 750mA-5A



I²t vs. current curves — 6A-20A



Solder reflow profile

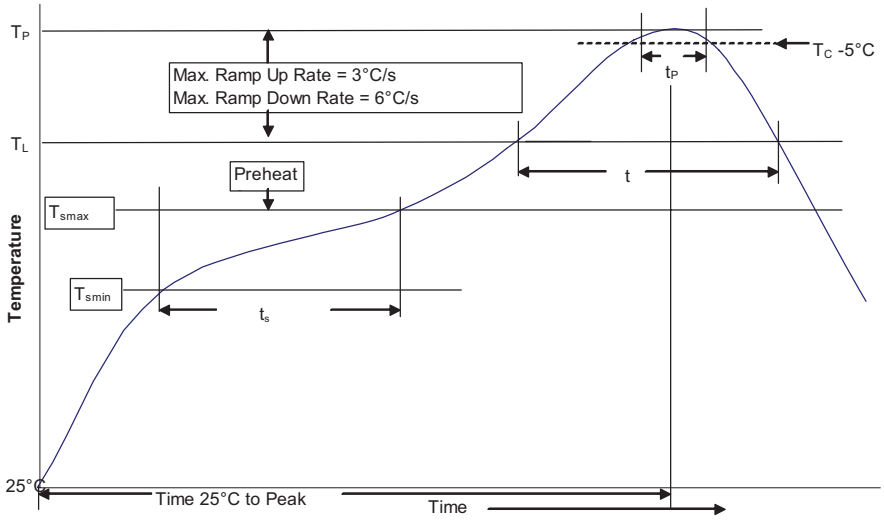


Table 1 - Standard SnPb Solder (T_C)

Package Thickness	Volume mm³ <350	Volume mm³ ≥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 mm³ >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 (T_L) Time at liquidous (t_L)		183°C 60-150 Seconds	217°C 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 (T_p to T_{smax})		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_p) is defined as a supplier minimum and a user maximum.

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

North America
Eaton's Electrical Group
Electronics Division
1225 Broken Sound Parkway NW
Suite F
Boca Raton, FL 33487-3533
Tel: 1-561-998-4100
Fax: 1-561-241-6640
Toll Free: 1-888-414-2645

Eaton's Electrical Group
Electronics Division
P.O. Box 14460
St. Louis, MO 63178-4460
Tel: 1-636-394-2877
Fax: 1-636-527-1607

Europe
Eaton's Electrical Group
Electronics Division
Burton-on-the-Wolds
Leicestershire, LE 12 5th UK
Phone: +44 (0) 1509 882 600
Fax: +44 (0) 1509 882 786

Eaton's Electrical Group
Electronics Division
Avda Santa Eulalia, 290
Terrassa, Barcelona 08223 Spain
Phone: +34-93-736-2813
Fax: +34-93-783-5055

Asia Pacific
Eaton's Electrical Group
Electronics Division
No.2, #06-01
Serangoon North Avenue 5
Singapore 554911
Tel: +65 6645 9888
Fax: +65 6728 3155

Eaton's Electrical Group
Electronics Division
114 Old State Road
Ellisville, MO 63021
United States
www.eaton.com/elx

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