C2Q Apr2013D

Type C2Q

0603 Size

RoHS 6 Compliant

Surface Mount Very Fast-Acting Chip Fuse

C2Q Series Fuse

Features

- Fast Acting
- Small size,0603 SMD
- Current rating from 250mA to 5A
- Wide operating temperature range from -55°C to 125°C
- Tape and Reel for automatic SMD placement
- Compatible with reflow and wave soldering
- RoHS6 compliant
- Halogen Free
- Leadfree

Electrical Characteristics (UL STD.248-14)

Testing Current	Blow Time	
	Minimum	Maximum
100%	4 Hrs.	N/A
200%	N/A	5 Sec
300%	N/A	0.2 Sec

Applications

- Notebook
- LCD monitor
- PC computer
- Office electronic equipment
- Industrial equipment
- Medical equipment
- POE, POE+
- LCD / LED monitor
- Power supply
- LCD / LED TV
- DC-DC Converter

HALOGEN FREE = HF

LEAD FREE = Pb

Safety Agency Approvals

SAFETY AGENCY	SAFETY AGENCY CERTIFICATE	AMPERE RANGE / VOLT @ I.R.ABILITY
cULus	E20624	250mA - 4A / 32V AC @ 35A and 63V DC @ 50A
		5A / 32V AC & DC @ 50A
CE		250mA - 4A / 32V AC @ 35A and 63V DC @ 50A 5A / 32V AC & DC @ 50A

Environmental Specifications

Shock Resistance	MIL-STD-202G, Method 213B, Test Condition I (100 G's peak for 6 milliseconds; Sawtooth Waveform)
Vibration Resistance	MIL-STD-202G, Method 201A (10-55 Hz, 0.06 inch, total excursion).
Salt Spray Resistance	MIL-STD-202G, Method 101E, Test condition B (48 hrs).
Insulation Resistance	MIL-STD-202G, Method 302, Test Condition A (After Opening) 10,000 ohms minimum.
Solderability	MIL-STD-202G, Method 208H
Resistance to solder Heat	MIL-STD-202G Method 210F,Test Condition C.Top Side (260℃, 20 sec) MIL-STD-202G Method 210F,Test Condition D.Bottom Side (260℃, 10 sec)
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B (-65℃ to +125℃).
Operating Temperature	-55℃ to +125℃

Specifications Subject to change without notice.

Bel Fuse Inc. 206 Van Vorst Street, Jersey City, NJ 07302 • Tel: 201-432-0463 • Fax: 201-432-9542 • E-Mail: belfuse@belf.com
Website: www.belfuse.com

Type C2Q

Surface Mount Very Fast-Acting Chip Fuse

0603 Size

RoHS 6 Compliant

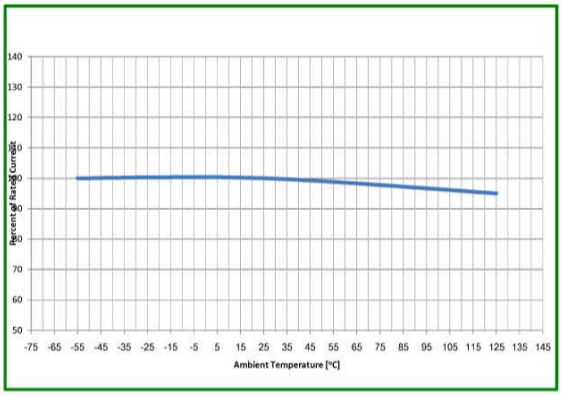
HF Pb

C2Q May2012C

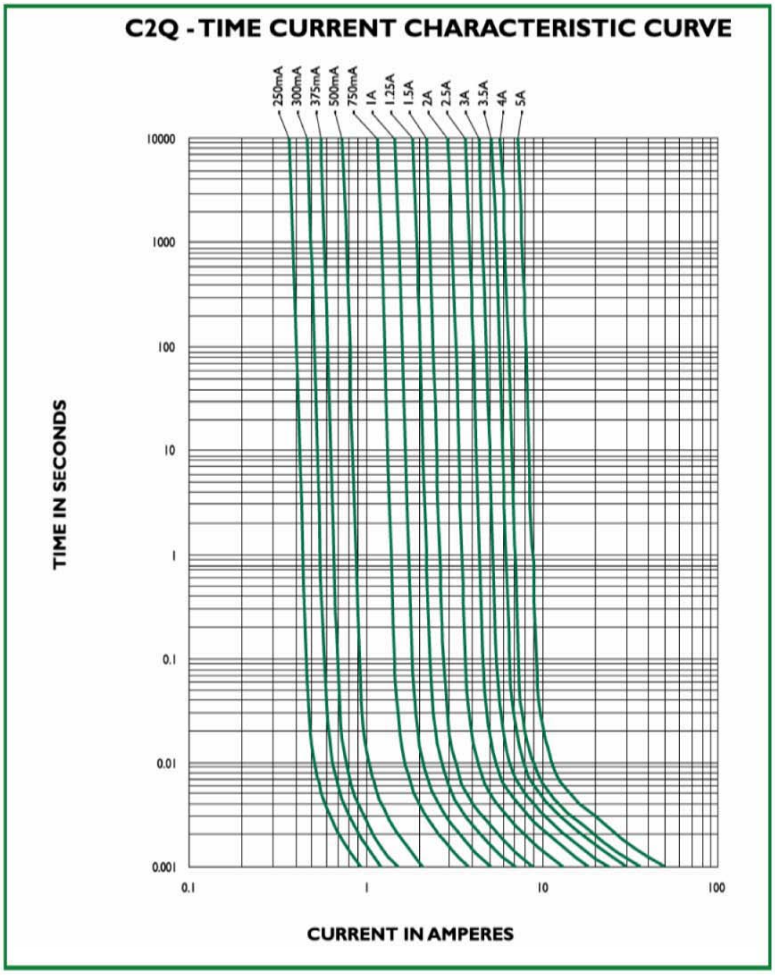
Electrical Specifications

Catalog Number	Ampere Rating (A)	Nominal Cold Resistance (ohm)	Nominal Volt-drop @100% In (volt)	Interrupting Rating	Voltage Rating (V)	Nominal Melting I2T <10 m Sec (A2 Sec)	Nominal Melting I2T @ 10 In (A2 Sec)	Nominal Power Dissipation @100% In (W)	Agency Approvals	
									cULus	CE
C2Q 250	250mA	0.77	0.243	250mA - 4A / 32V AC @ 35A and 63V DC @ 50A	63	0.002	0.0001	0.06	Y	Y
C2Q 300	300mA	0.54	0.217		63	0.003	0.0001	0.07	Y	Y
C2Q 375	375mA	0.42	0.196		63	0.005	0.0002	0.07	Y	Y
C2Q 500	500mA	0.28	0.171		63	0.009	0.0004	0.09	Y	Y
C2Q 750	750mA	0.17	0.159		63	0.020	0.0011	0.12	Y	Y
C2Q 1	1A	0.122	0.154		63	0.036	0.002	0.15	Y	Y
C2Q 1.25	1.25A	0.092	0.144		63	0.058	0.004	0.18	Y	Y
C2Q 1.5	1.5A	0.073	0.138		63	0.084	0.006	0.21	Y	Y
C2Q 2	2A	0.053	0.133		63	0.15	0.011	0.27	Y	Y
C2Q 2.5	2.5A	0.042	0.130		63	0.24	0.019	0.33	Y	Y
C2Q 3	3A	0.034	0.130		63	0.36	0.030	0.39	Y	Y
C2Q 3.5	3.5A	0.028	0.131		63	0.50	0.044	0.46	Y	Y
C2Q 4	4A	0.023	0.131		63	0.63	0.059	0.52	Y	Y
C2Q 5	5A	0.019	0.131	5A / 32V AC & DC @ 50A	32	1.05	0.103	0.66	Y	Y

Temperature Derating Curve



Average Time Current Curve



Specifications Subject to change without notice.

Bel Fuse Inc. 206 Van Vorst Street, Jersey City, NJ 07302 • Tel: 201-432-0463 • Fax: 201-432-9542 • E-Mail: belfuse@belf.com
Website: www.belfuse.com

Type C2Q

Surface Mount Very Fast-Acting Chip Fuse

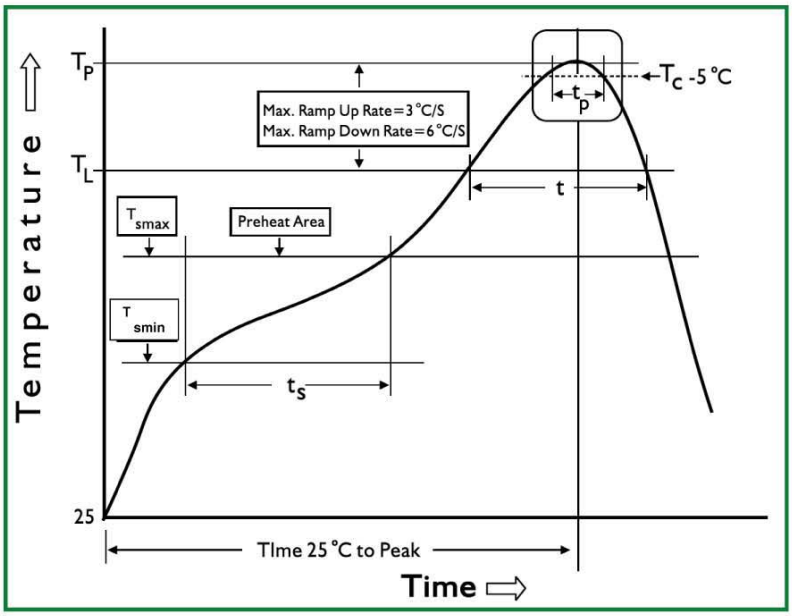
0603 Size

RoHS 6 Compliant

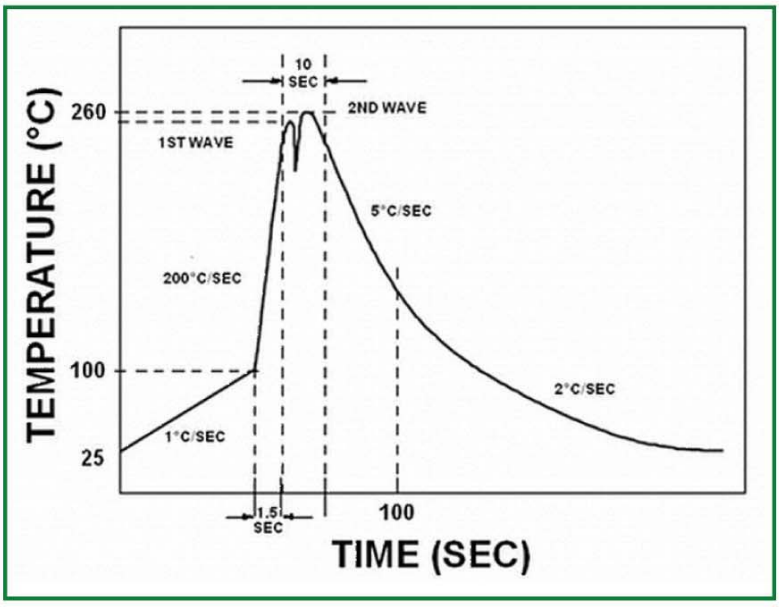
HF Pb

Soldering Parameters

Lead-Free IR Reflow Profile (IPC/JEDEC J-STD-020D)	
Reflow Parameter	
Minimum preheat temperature (TsMIN)	150 °C
Maximum preheat temperature (TsMAX)	200 °C
Preheat Time	60-180 seconds
TsMAX to TL ramp-up rate	3 °C/second max.
Time above temperature TL (tL)	217°C 60-120 seconds
Peak Temperature (TP)	260 °C max.
Time within 5° of Peak TP	20-40 seconds
Ramp-down rate	6 °C/second max.



Lead-free Wave Soldering Profile	
Wave Soldering Parameter	
Average ramp-up rate	200°C / second
Heating rate during preheat	typical 1 ~ 2 °C / second Max. 4°C/ second
Final preheat temperature	within 125°C of soldering temperature
Peak temperature (TP)	260°C
Time within +0 °C / −5°C of actual peak temperature	10 seconds
Ramp-down rate	5 °C / second max.



Specifications Subject to change without notice.

Type C2Q

Surface Mount Very Fast-Acting Chip Fuse

0603 Size
RoHS 6 Compliant

C2Q Apr2013D

Physical Specifications

Materials	Body : Ceramic Substrate
	Terminations: Ag / Ni / Sn (100% Lead -free)
	Element Cover Coating : Lead-free Glass
Marking	On Fuse:
	None
	On label:
	"bel" , "C2Q", "Current Rating","Voltage Rating","Interrupting Rating", "Appropriate Safety Logos" and " ", "(China RoHS compliant).

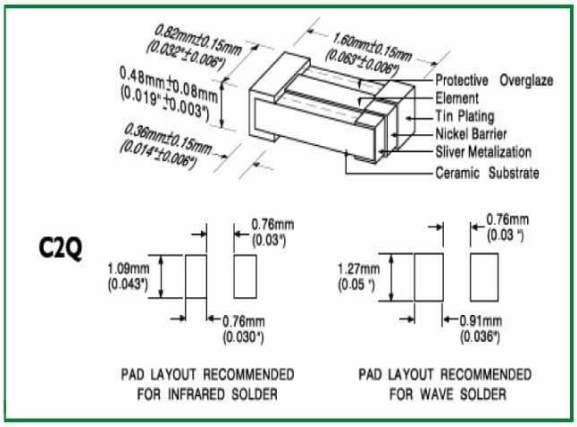
Fuse FGNO Explanation

06XX-[XXXX]-XX, [XXXX]=Ampere Rating

Fraction	Decimal	Milliamps	Bel FGNO[XXXX]
1/32	0.032	32	0032
1/25	.040	40	0040
1/20	.050	50	0050
1/16	.063	63	0063
8/100	.080	80	0080
1/10	.100	100	0100
1/8	.125	125	0125
15/100	.150	150	0150
	.160	160	0160
2/10	.200	200	0200
1/4	.250	250	0250
3/10	.300	300	0300
	.315	315	0315
3/8	.375	375	0375
4/10	.400	400	0400
1/2	.500	500	0500
6/10	.600	600	0600
	.630	630	0630
7/10	.700	700	0700
3/4	.750	750	0750
8/10	.800	800	0800

Fraction	Decimal	Amps	Bel FGNO[XXXX]
	1.0	1	1000
1-1/4	1.25	1.25	1250
1-1/2	1.50	1.5	1500
	1.60	1.6	1600
	2.0	2	2000
2-1/4	2.25	2.25	2250
2-1/2	2.5	2.5	2500
	3.0	3	3000
	3.15	3.15	3150
3-1/2	3.5	3.5	3500
	4.0	4	4000
	5.0	5	5000
	6.0	6	6000
	6.3	6.3	6300
	7.0	7	7000
7-1/2	7.5	7.5	7500
	8.0	8	8000
		10	9100
		12	9120
		15	9150
		20	9200
		25	9250
		30	9300

Mechanical Dimensions



Ordering Information

0686 - XXXX - XX

FUSE TYPE
0686

AMPERE RATING
Refer to fuse FGNO explanation table

QUANTITY & PACKAGING CODE
01 = 5000 pcs with Tape and Reel

Packaging

Packaging Tape & Reel	Packaging Specification	Quantity	Quantity & Packaging Code
8 mm wide tape with 7 inches Diameter reel	EIA Standard 481-D	5000	0686-XXXX-01

Specifications Subject to change without notice.

CORPORATE OFFICE
Bel Fuse Inc.
206 Van Vorst Street
Jersey City, NJ 07302
Tel 201-432-0463
Fax 201-432-9542
E-Mail: belfuse@belf.com
Website: www. belfuse.com

FAR EAST OFFICE
Bel Fuse Ltd.
8/F Luk Hop Industrial Building
8 Luk Hop Street
San Po Kong
Kowloon, Hong Kong
Tel 852-2328-5515
Fax 852-2352-3706

EUROPE OFFICE
Bel Fuse Europe Ltd.
Preston Technology Management Centre
Marsh Lane, Suite F15
Preston, Lancashire, PR1 8UQ
United Kingdom
Tel 44-1772-556601
Fax 44-1772-561008

EUROPE
Bel Stewart GmbH
Industriestrasse 20
61381 Friedrichsdorf
Germany
Tel 49-6172-9552-0
Fax 49-6172-9552-40