

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	0685P9150-01
Manufacturer:	Bel Fuse Inc.
Package:	Tape & Reel (TR), Cut Tape (CT), Digi-Reel®
Availability:	Please confirm with sales

Product Page:

<https://antrexco.com/product/details/bel-fuse-inc/0685p9150-01.html>

Request a Quote:

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Contact Information

Email: info@antrexco.com

WhatsApp: +86-186-8066-5326

Website: <https://antrexco.com>

Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

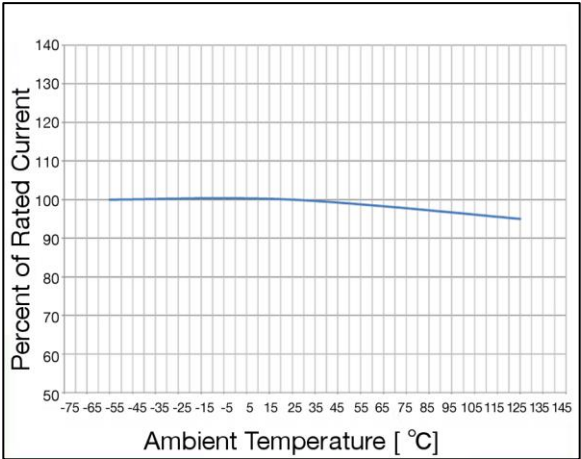
Secure sourcing support for OEM / EMS projects

Note:

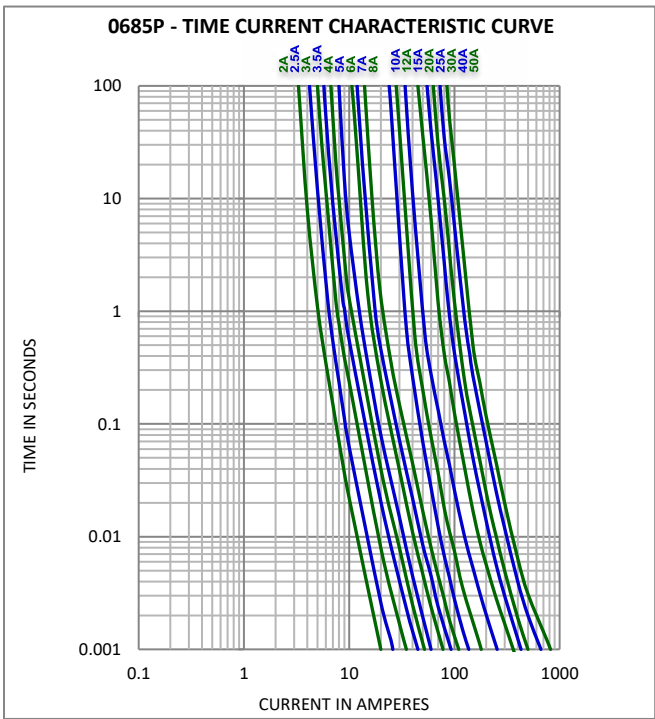
This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

Temperature Derating Curve



Average Time Current Curve



Electrical Specifications

Part Number	Ampere Rating (A)	Marking Code	Nominal Cold Resistance (mohms)	Maximum Volt-drop @100% In (Volt) max.	Voltage and Interrupting Ratings	Nominal Melting I²T @10 In (A² Sec)	Maximum Power Dissipation @100% In (W)	Agency Approvals
								
0685P2000-01	2	2	115.0	0.370	See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings	0.2	0.74	Y
0685P2500-01	2.5	T	82.0	0.305		0.6	0.76	Y
0685P3000-01	3	3	60.0	0.270		1.3	0.81	Y
0685P3500-01	3.5	Z	50.0	0.240		2.6	0.84	Y
0685P4000-01	4	4	40.0	0.210		4.0	0.84	Y
0685P5000-01	5	5	26.0	0.205		4.1	1.03	Y
0685P6000-01	6	6	20.0	0.166		8.0	1.00	Y
0685P7000-01	7	7	16.0	0.159		12.5	1.11	Y
0685P8000-01	8	8	12.0	0.128		19	1.02	Y
0685P9100-01	10	10	5.70	0.065		25	0.65	Y
0685P9120-01	12	12	4.60	0.065		48	0.78	Y
0685P9150-01	15	15	3.40	0.065		80	0.98	Y
0685P9200-01	20	20	2.20	0.050		100	1.00	Y
0685P9250-01	25	25	1.60	0.050		225	1.25	Y
0685P9300-01	30	30	1.30	0.050		255	1.50	Y
0685P9400-01	40	40	1.05	0.054		320	2.16	Y
0685P9500-01	50	50	0.80	0.072		500	3.60	Y

Consult manufacturer for other ratings

NOTES: Test Conditions

All test were conducted with the fuses soldered to a PCB with a nominal thickness of 1.6mm with copper traces measuring 100mm overall length. Copper trace/width as described below.

Device designed to be mounted with marking facing up.

Device designed to carry rated current for 4 hours minimum. It is recommended that device be operated continuously at no more than 80% of rated current when in a +25°C ambient, with further derating at elevated ambient temperatures.

Fuse Rating	Test Board Trace Dimension
2A – 5.0 A	1 oz. copper, 5.0 mm wide
>5.0 A – 8.0 A	2 oz. copper, 7.5 mm wide
>8.0 A – 30.0 A	3 oz. copper, 10.0mm wide
>30.0 A – 40.0 A	3 oz. copper, 15.0 mm wide
>40.0 A – 50.0 A	3 oz. copper, 25.0 mm wide

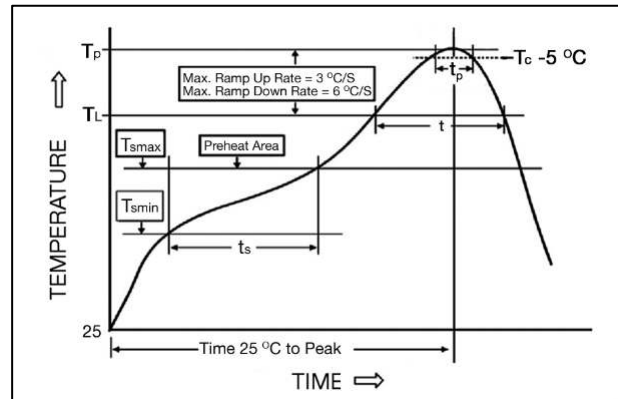
Environmental Specifications

Shock Resistance	MIL-STD-202G, Method 213B, Test Condition 1 (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°C, 20 sec) MIL-STD-202G, Method 210F, Test Condition D. Bottom Side(260°C, 10 sec)
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B (-65°C to +125°C).
Operating Temperature	-55°C to +125°C
Moisture Sensitivity Level	1 (According to IPC J-Std-020)

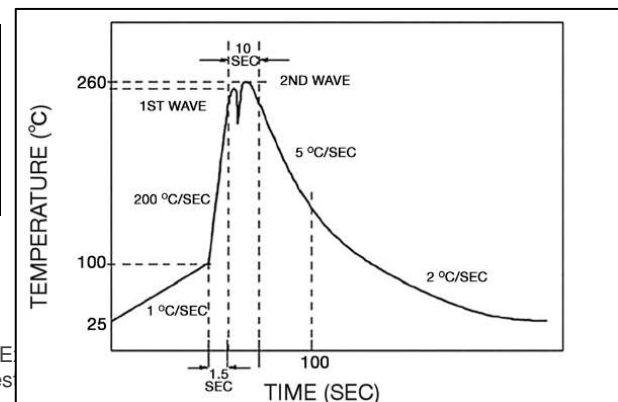
High temperature storage	MIL-STD-202 Method 108
Temperature cycling	JESD22 Method JA-104, Test Condition B
Biased humidity	MIL-STD-202 Method 103, 85C/85% RH with 10% operating power for 1000 hrs.
Operational life	MIL-STD-202 Method 108, Test Condition D
Resistance to solvents	MIL-STD-202 Method 215
Mechanical shock	MIL-STD-202 Method 213, Test Condition C
Vibration	MIL-STD-202 Method 204
Resistance to soldering heat	MIL-STD-202 Method 210, Test condition B
Thermal shock	MIL-STD-202 Method 107
Solderability	J-STD-002
Board flex(SMD)	AEC-Q200-005
Terminal strength	AEC-Q200-006
Electrical characterization	3 temperature electrical

Soldering Parameters

IR Reflow Profile (IPC/JEDEC J-STD-020D)	
Preheat & Soak	
Temperature min (T _{min})	150°C
Temperature max (T _{max})	200°C
Time (T _{min} to T _{max}) (t _s)	60-120 seconds
Average ramp-up rate (T _{max} to T _p)	3°C/second max.
Liquidous temperature (T _L)	217°C
Time at liquidous (t _L)	60-150 seconds
Peak temperature (T _p)	260°C max
Time (t _p) within 5°C of the specified classification temperature (T _c)	30 seconds
Average ramp-down rate (T _p to T _{max})	6°C/second max.
Time 25°C to peak temperature	8 minutes 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



300 E
West

Type 0685P

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Final preheat temperature	within 125°C of soldering temperature
Peak temperature T_p	260°C
Time within +0°C / -5°C of actual peak temperature	10 seconds
Ramp-down rate	5°C / second max.

Fuse FGNO Explanation

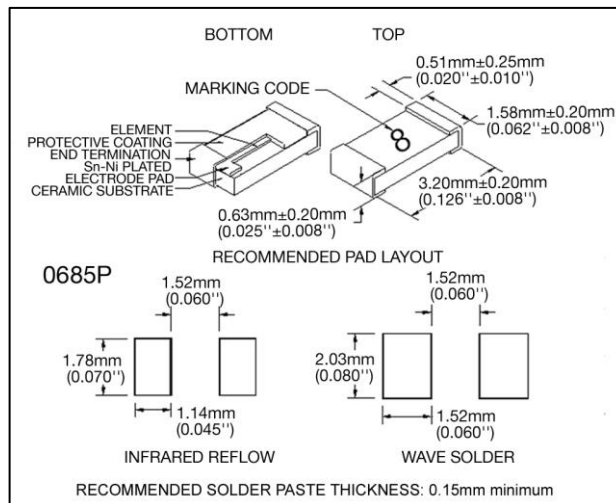
0685 P [XXXX] -XX

0685P=0685P; [XXXX]=Ampere Rating; XX=See Ordering Information as below

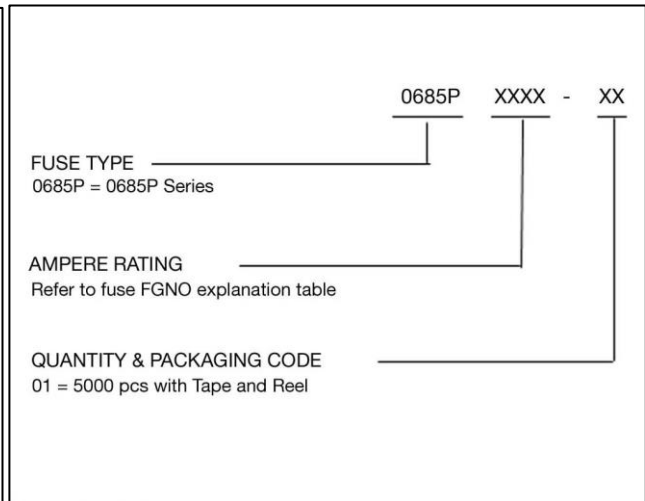
Amps	Bel FGNO[XXXX]
2	2000
2.5	2500
3	3000
3.5	3500
4	4000
5	5000
6	6000
7	7000
8	8000

Amps	Bel FGNO[XXXX]
10	9100
12	9120
15	9150
20	9200
25	9250
30	9300
40	9400
50	9500

Mechanical Dimensions



Ordering Information



Packaging

Packaging Tape & Reel	Packaging Specification	Quantity	Quantity & Packaging Code
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Specifications subject to change without notice

Bel Fuse Inc.
300 Executive Drive, Suite 300
West Orange, NJ 07052 USA

+1 201.432.0463
Bel.US.CS@belf.com
belfuse.com/circuit-protection

Type 0685P

8 mm wide tape with 7 inches Diameter reel	EIA Standard 481-E	5000	0685PXXXX-01
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