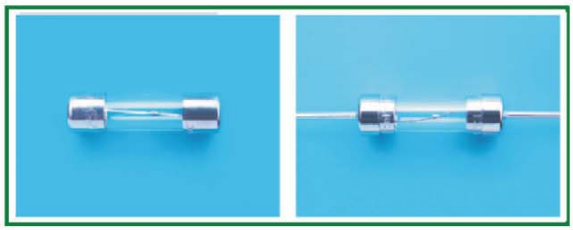
5ST Apr2013D

5 x 20mm Glass Tube
RoHS 6 Compliant

Type 5ST / 5STP
Time-lag Fuse Series (Low Breaking Capacity)

5ST / 5STP Series, 5 x 20mm Time-lag Fuse



Description

5x20mm Time lag,low breaking capacity, glass tube body cartridge fuse designed, approved and complied with IEC 60127- 2, standard sheet 3.

Electrical Characteristics (IEC-127-2 STANDARD SHEET 3)

Rated Current	1.5 *In*		2.1 *In*		2.75 *In*		4 *In*		10 *In*	
	MIN		MAX		MIN	MAX	MIN	MAX	MIN	MAX
63mA to 100mA	1		2		200	10	40	3	10	300
125mA to 12.5A	1		2		600	10	150	3	20	300
	hr.		min.		ms	sec	ms	sec	ms	ms

In clause 9.2,the test voltage for 5STP ratings from 63mA to 6.3A is 63VDC.

Features

- **Meet IEC standard 60127-2,Sheet 3**
- **Wide operating temperature range**
- **Bulk and Tape & Reel packing available**
- **RoHS6 compliant**
- **Halogen Free**
- **Leadfree**

Applications

Provide individual protection for components or internal circuits.

- **Power Supplies**
- **Battery charger**
- **Monitor**
- **Adapter**

LEAD FREE = Pb

HALOGEN FREE = HF

Safety Agency Approvals

SAFETY AGENCY	SAFETY AGENCY CERTIFICATE NUMBER	AMPERE RANGE / VOLT @ I.R.ABILITY
	1021774	63mA - 6.3A / 250V AC @35A or 10 In whichever is greater
	40000507	
	EM231	
	E20624	63mA - 10A / 250V AC @35A or 10 In whichever is greater
	LR39772	
	2003010207030316	63mA - 6.3A / 250V AC @35A or 10 In whichever is greater

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

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HF Pb

bel

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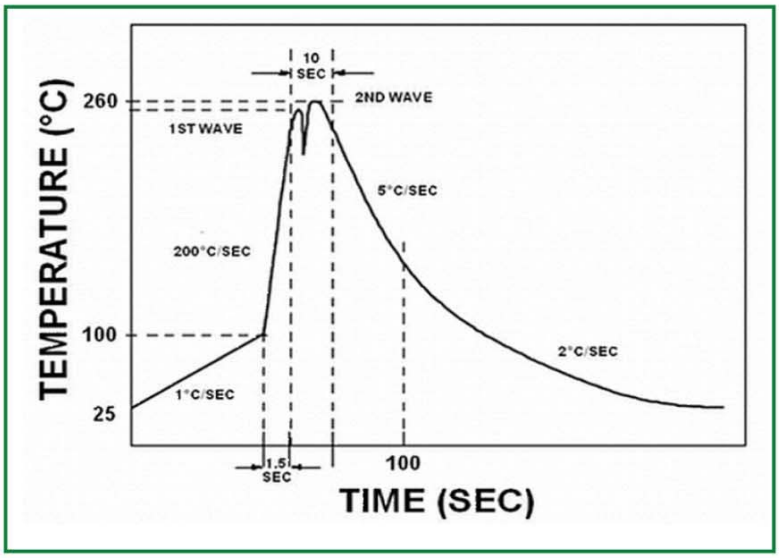
Electrical Specifications

Catalog Number	Ampere Rating	Typical Cold Resistance (ohm)	Volt-drop @100% In (Volt) Max.	Voltage Rating (V)	Interrupting Rating	Melting I2T <10 m Sec (A2 Sec)	Melting I2T @ 10 In (A2 Sec)	Maximum Power Dissipation (W)	Agency Approvals						
									cULus	SP	CCC	S	VDE		CE
5ST (P) 63-R	63mA	19.5	1.90	250	250V AC @35A or 10 In whichever is greater	0.008	0.021	0.28	Y	Y	Y	Y	Y	Y	Y
5ST (P) 80-R	80mA	13.2	1.58	250		0.015	0.036	0.29	Y	Y	Y	Y	Y	Y	Y
5ST (P) 100-R	100mA	11.0	1.63	250		0.03	0.06	0.30	Y	Y	Y	Y	Y	Y	Y
5ST (P) 125-R	125mA	7.02	1.29	250		0.05	0.11	0.30	Y	Y	Y	Y	Y	Y	Y
5ST (P) 160-R	160mA	4.10	0.92	250		0.08	0.19	0.31	Y	Y	Y	Y	Y	Y	Y
5ST (P) 200-R	200mA	2.60	0.77	250		0.15	0.33	0.32	Y	Y	Y	Y	Y	Y	Y
5ST (P) 250-R	250mA	1.70	0.64	250		0.26	0.58	0.32	Y	Y	Y	Y	Y	Y	Y
5ST (P) 315-R	315mA	1.30	0.57	250		0.46	1.01	0.33	Y	Y	Y	Y	Y	Y	Y
5ST (P) 400-R	400mA	0.72	0.41	250		0.81	1.76	0.34	Y	Y	Y	Y	Y	Y	Y
5ST (P) 500-R	500mA	0.57	0.47	250		1.4	3.1	0.34	Y	Y	Y	Y	Y	Y	Y
5ST (P) 630-R	630mA	0.18	0.14	250		0.9	1.5	0.18	Y	Y	Y	Y	Y	Y	Y
5ST (P) 800-R	800mA	0.14	0.14	250		1.6	2.5	0.20	Y	Y	Y	Y	Y	Y	Y
5ST (P) 1-R	1A	0.10	0.13	250		2.4	3.3	0.17	Y	Y	Y	Y	Y	Y	Y
5ST (P) 1.25-R	1.25A	0.052	0.08	250		4.1	5.5	0.19	Y	Y	Y	Y	Y	Y	Y
5ST (P) 1.6-R	1.6A	0.036	0.08	250		6.9	8.9	0.23	Y	Y	Y	Y	Y	Y	Y
5ST (P) 2-R	2A	0.028	0.08	250		12	15	0.26	Y	Y	Y	Y	Y	Y	Y
5ST (P) 2.5-R	2.5A	0.023	0.08	250		20	24	0.31	Y	Y	Y	Y	Y	Y	Y
5ST (P) 3.15-R	3.15A	0.017	0.08	250		33	39	0.36	Y	Y	Y	Y	Y	Y	Y
5ST (P) 4-R	4A	0.013	0.07	250		56	64	0.42	Y	Y	Y	Y	Y	Y	Y
5ST (P) 5-R	5A	0.096	0.07	250		95	105	0.49	Y	Y	Y	Y	Y	Y	Y
5ST (P) 6.3-R	6.3A	0.073	0.07	250		160	173	0.57	Y	Y	Y	Y	Y	Y	Y
5ST (P) 8-R	8A	0.062	0.07	250		260	282	0.80	Y	Y					Y
5ST (P) 10-R	10A	0.052	0.07	250		439	461	1.00	Y	Y					Y
5ST (P) 12.5-R	12.5A	0.041	0.07	250	No Safety approvals	490	679	1.70							

Consult manufacturer for other ratings

Soldering Parameters

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.



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5 x 20mm Glass Tube
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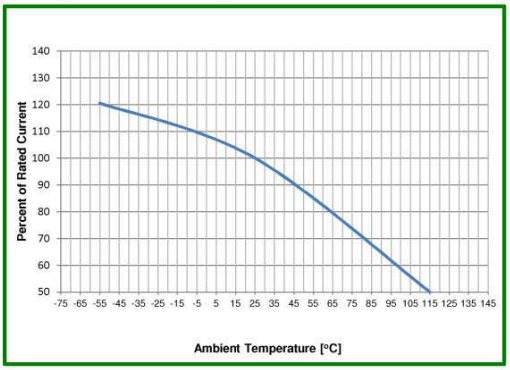
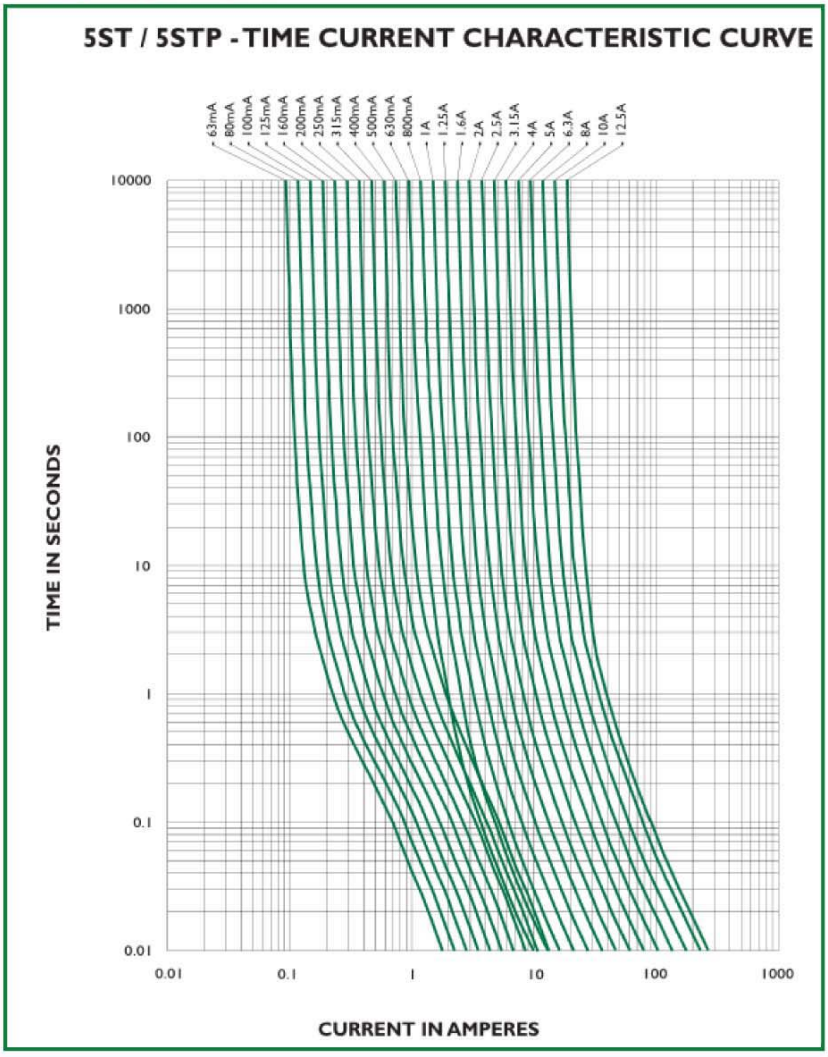
Temperature Derating Curve



Average Time Current Curve



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 B (After Opening) 100,000 ohms minimum.
Solderability	MIL-STD-202G, Method 208H
Resistance to solder Heat	MIL-STD-202G Method 210F,Test Condition B.(260+/-5℃,10+/-1 sec)
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B (-65℃ to +125℃).
Operating Temperature	-55℃ to +125℃
Terminal Strength	IEC-68-2-21

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5 x 20mm Glass Tube
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HF Pb

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Physical Specifications

Materials	Body : Glass
	Cap : Nickel Plated Brass Caps
	Leads: Matte Tin Plated Copper
Marking	On Fuse:
	"bel" , "T" ," Current Rating","L", "250V",
	"Appropriate Safety Logos"," ✔ "(RoHS 6 compliant)
	On label:
	"bel" , "5ST", or "5STP","Current Rating","Voltage Rating","Interrupting Rating", "Appropriate Safety Logos" and " "," "(China RoHS compliant).

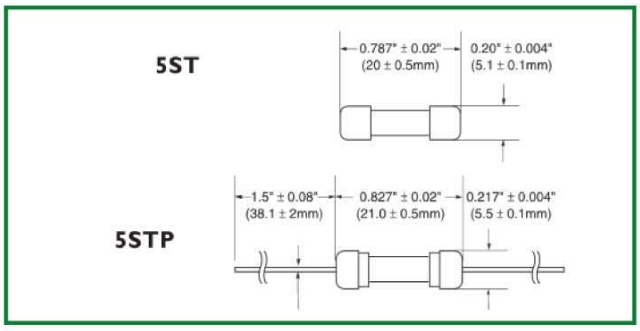
Fuse FGNO Explanation

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

0652 R XXXX - X X

FUSE TYPE
0652

R = RoHS Compliant

AMPERE RATING
Refer to fuse FGNO explanation table

SAFETY STANDARD CODE
1 = IEC, 250V, 63mA - 12.5A

QUANTITY & PACKAGING CODE
1 = Cartridge version, 1K /box
3 = Pigtail Version, 1K bulk pack.
6 = Pigtail version, Tape and Reel, 1500/reel.

* Ratings 6.3A and less have 0.032" diameter lead;
Ratings 8A and above have 0.040" diameter lead.

Specifications subject to change without notice

Packaging

Packaging Option	Packaging Specification	Quantity	Packaging Code	Inside Tape Spacing
Bulk	N/A	1000	11	N/A
Bulk (Pigtail Type)	N/A	1000	13	N/A
Tape & Reel, 10 mm Pitch	EIA-296-F	1500	16	63

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