Engineering Product Specification

BSF FUSE

Revision: A

Revision Log

Rev. #	Revision Description	Date	Author	Approval.
A		08/21/2016	Gem	Bruce

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A		08/21/2018	Bruce	Mr. Guo

Scope{ TC "Scope" \f C \l "1" }

This specification applies to BSF Series Fuses.

1 General{ TC "General" \f C \l "1" }

1.1 General Information

- Design according BS1362 General Purpose Fuse links for domestic and similar purposes (primarily for use in plugs)
- Design according IEC60269-3/GB13539.3(Chinese Standard) and GB13539.5(Chinese Standard)
- ASTA Diamond mark product
- Fast/Medium British Plug Top Fuse
- Rated voltage f 240V AC
- Very High Breaking Capacity f 6000A
- RoHS Compliance with EU directive 2002/95/EC

1.2 General Description

BSF Series are the fuses used for domestic and similar purposes (primarily for use in plugs), the product are 1/4” x 1” fast/medium British plug top fuse, the product using ceramic tube in order to enhance the performing of reliability and high breaking capacity, the product using nickel-plated copper as end cap in order to enhance the product shelf life. The Maximum power loss of product is 1 Watt. The conventional non-fusing current are 1.6 times of rated current with 30 min, and the conventional fusing current are 1.9 times of rated current within 30 min. The products are used for assembly on the fuse clip/plug which fulfills BS1362. T

Ampere Rating

Catalog Symbol	Designation
3A	BSF-3A
5A	BSF-5A
10A	BSF-10A
13A	BSF-13A

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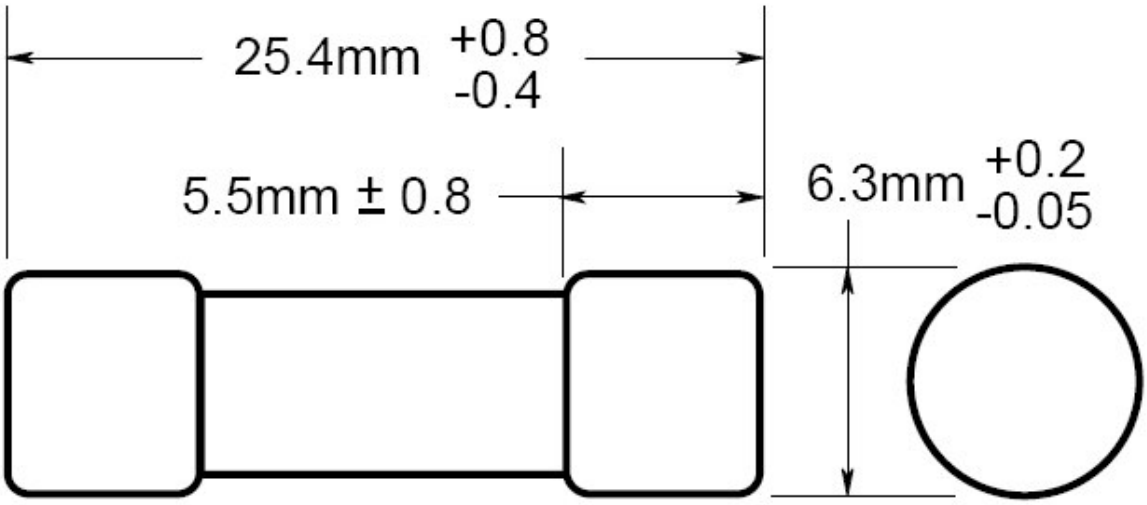
2 Mechanical Specification{ TC "**Mechanical Specification**" \f C \l "1" }

2.1 Dimension



2.2 Device body
Ceramic body

2.3 Terminal
Copper end cap (10A, 13A) / Brass end cap (3A, 5A)
Nickel plated surface

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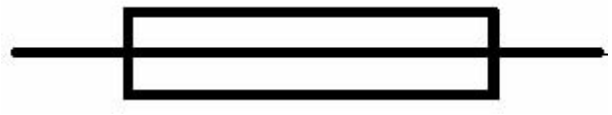
3 Electrical Specification{ TC "**Electrical Specification**" \f C \l "1" }

3.1 Equivalent circuit



3.2 Electrical characteristics

Specification							
Part No.	Rated Voltage AC	Rated Current	Breaking Capacity at Rated Voltage (50Hz) AC [1]	Max. Power Dissipation (W)	Typical Cold Resistance (mOhms) [2]	Typical Pre-Arching I2t (A2Sec) [3]	Print Color
BSF-3A	240V	3A	6000A	1W	44.4	38.4	Red
BSF-5A	240V	5A	6000A	1W	20.9	173.8	Black
BSF-10A	240V	10A	6000A	1W	7.42	345	Black
BSF-13A	240V	13A	6000A	1W	4.41	870	Brown

Note: 1 Breaking Capacity is tested by 264VAC/50Hz, PF 0.3-0.4

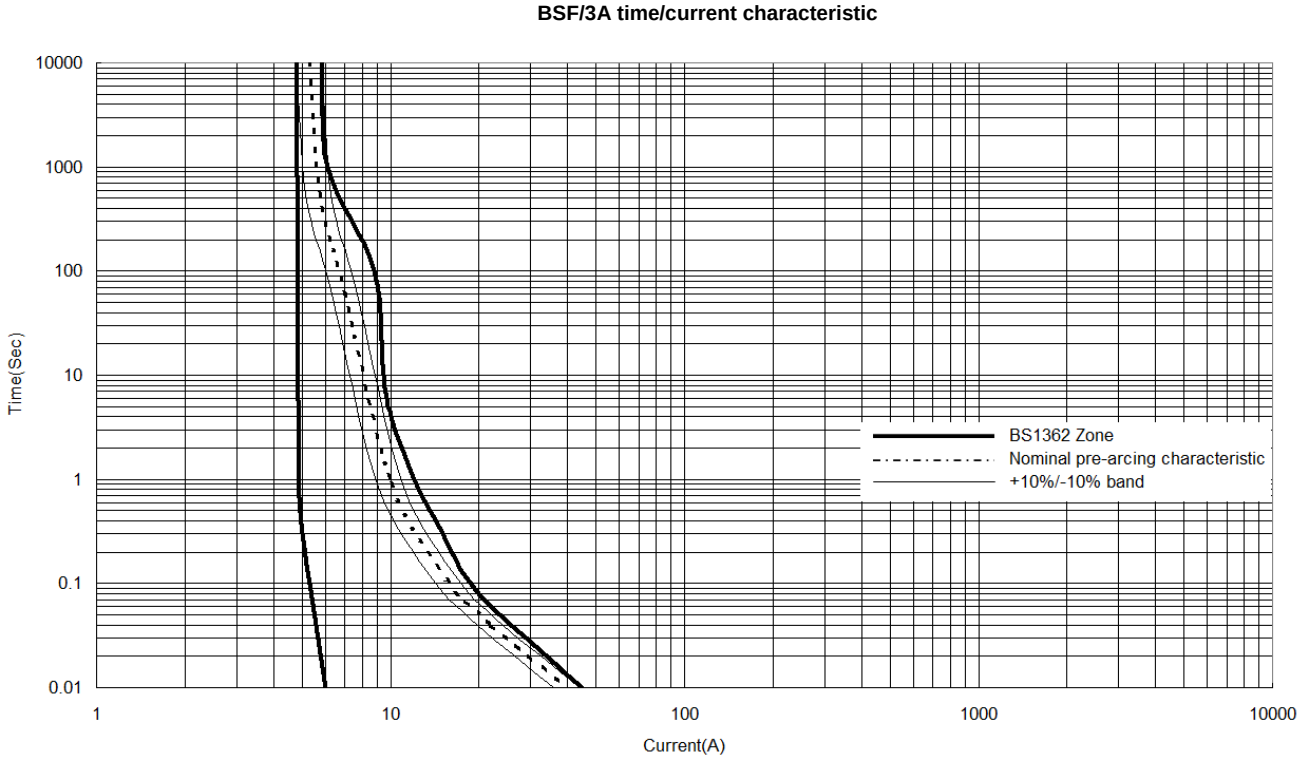
2 DC Cold Resistance are measured at <10% of rated current in ambient temperature of 20^{o} C

3 Typical Pre-arching I2t are measured at 10In and rated voltage

3.3 Time vs. Current Characteristic (Measured with a constant current power supply)

Part No.	**Limit for Blowing Time @ different Amp Rating**		
	100% Rated Current	160% Rated Current	190% Rated Current
BSF-3A	Min 1000h	Min 30min.	Max. 30Min
BSF-5A	Min 1000h	Min 30min.	Max. 30Min
BSF-10A	Min 1000h	Min 30min.	Max. 30Min
BSF-13A	Min 1000h	Min 30min.	Max. 30Min

3.4 Time Current Curve (Average Melt)



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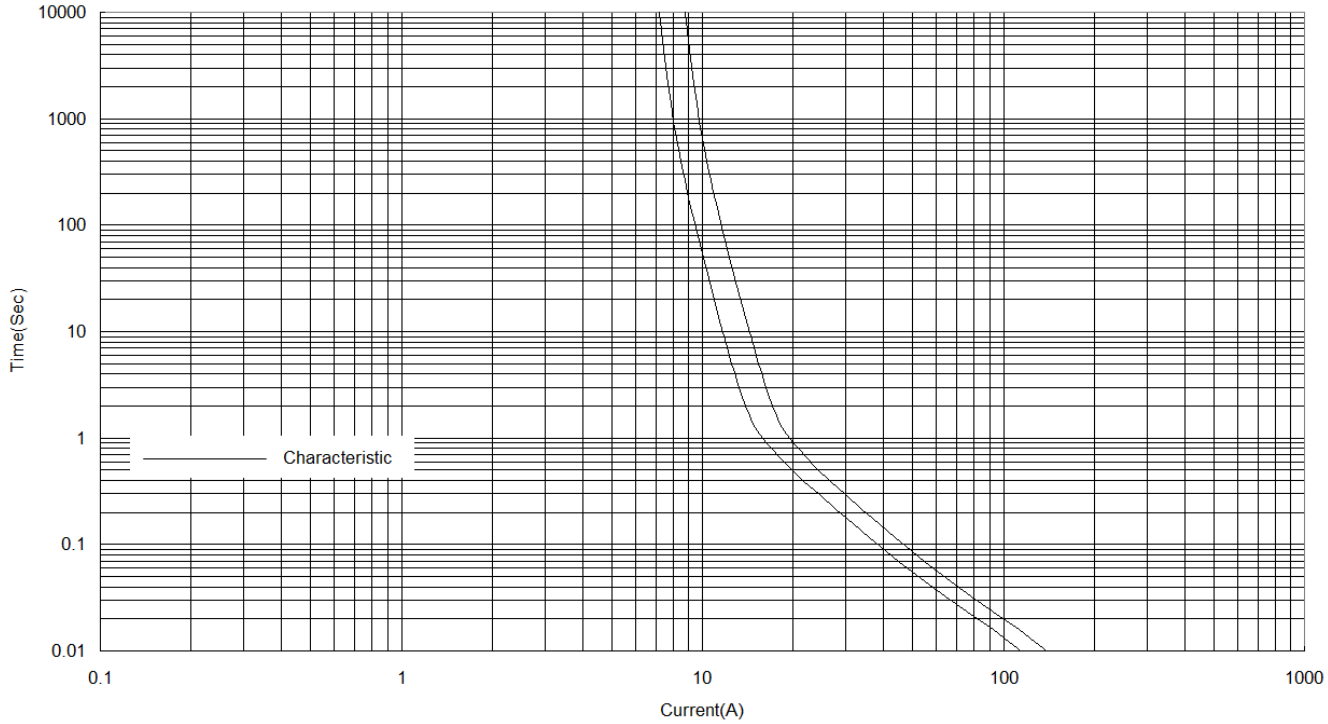
BSF/5A time/current characteristic



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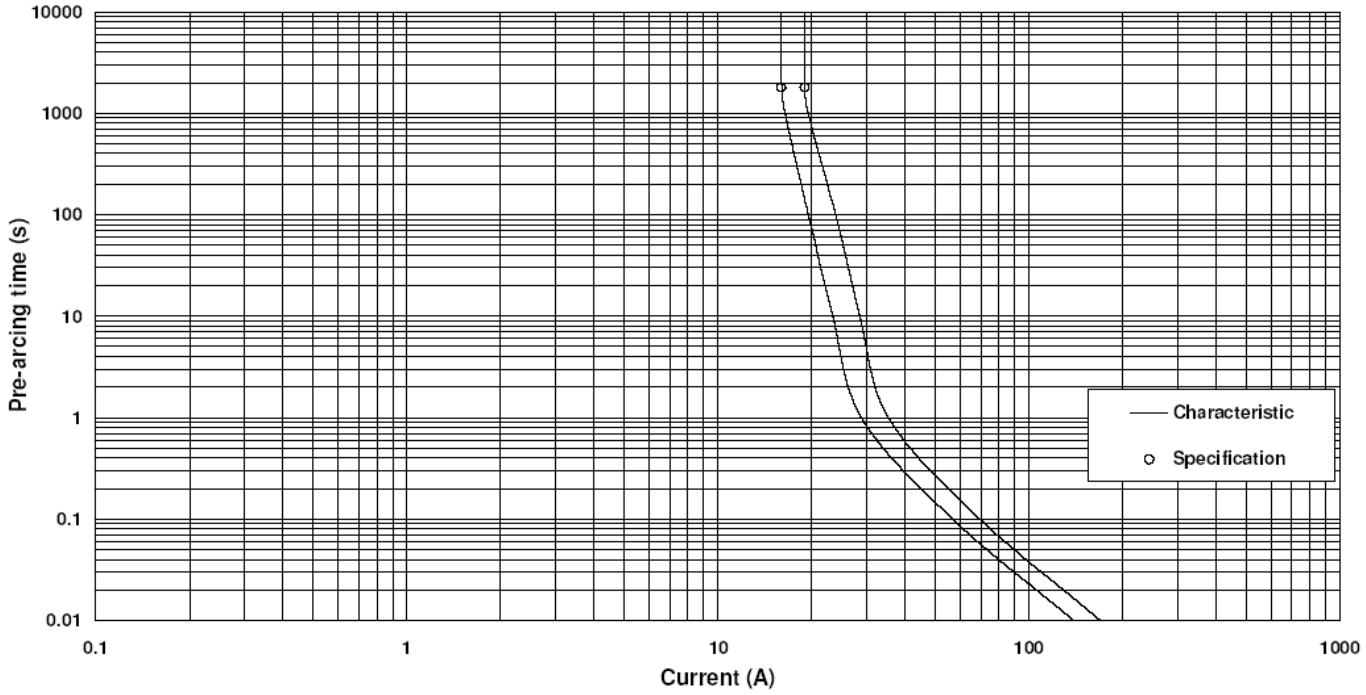
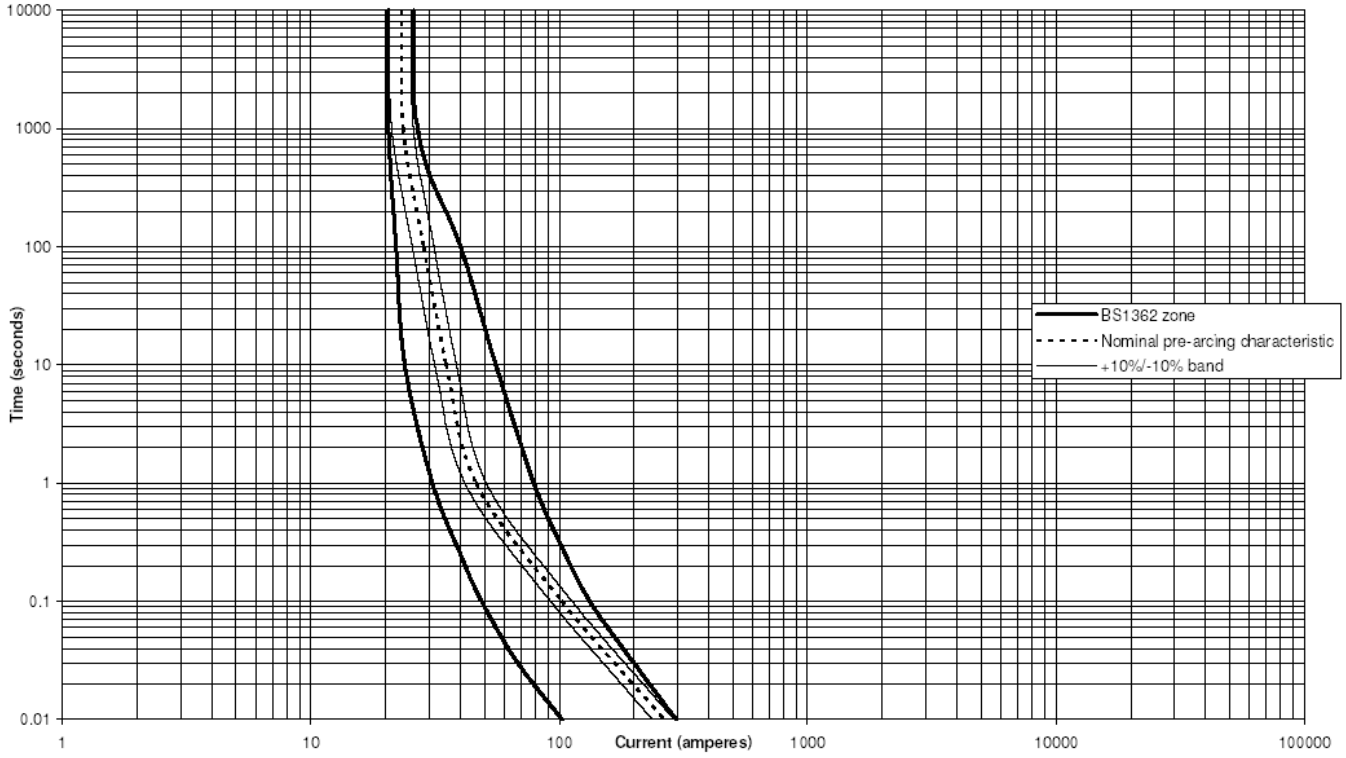
BSF/10A time/current characteristic



BSF/13A time/current characteristic



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4 Operating condition{ TC "**Operating condition**" \f C \l "1" }

8.1	Ambient temperature	-5 to 35℃
8.2	Storage temperature	-5 to 35℃
8.3	Temperature Inside an Enclosure	not exceed than 15k of ambient temperature
8.4	Altitude	not exceed 2000 above sea level
8.5	Atmospheric Conditions	50% at maximum temperature of 40℃, the corresponding relative humidity at lower temperatures would be higher, e.g. 90% at 20℃
8.6	Voltage	AC system voltage do not exceed 110% of rated voltage
8.7	Current	The current to be carried and to be broken are within the range specified in 7.3
8.8	Frequency	the frequency is within the range 45Hz to 62Hz
8.9	Conditions of install	the fuse link is installed and used in normal conditions experienced in domestic and similar surroundings

5 Standards and agency information{ TC "**standards and agency information**" \f C \l "1" }

5.1 ASTA approval and related standard

Mark:
Standard: BS1362
Certificate Number: XXXX

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