

# Raychem Fast Acting Surface-Mount Fuses

## PRELIMINARY DATA

### Benefits

- Small size with high current ratings
- Excellent temperature stability
- High reliability and resilience
- Strong arc suppression characteristics

### Features

- Monolithic, multilayer design
- Lead-free construction
- High temperature performance
- -55° to +125°C operating range

### Applications

- Laptops
- Digital cameras
- Cell phones
- Printers
- DVD players
- Portable electronics
- Game systems
- LCD displays
- Scanners



### Clear Time Characteristics (Fast Acting):

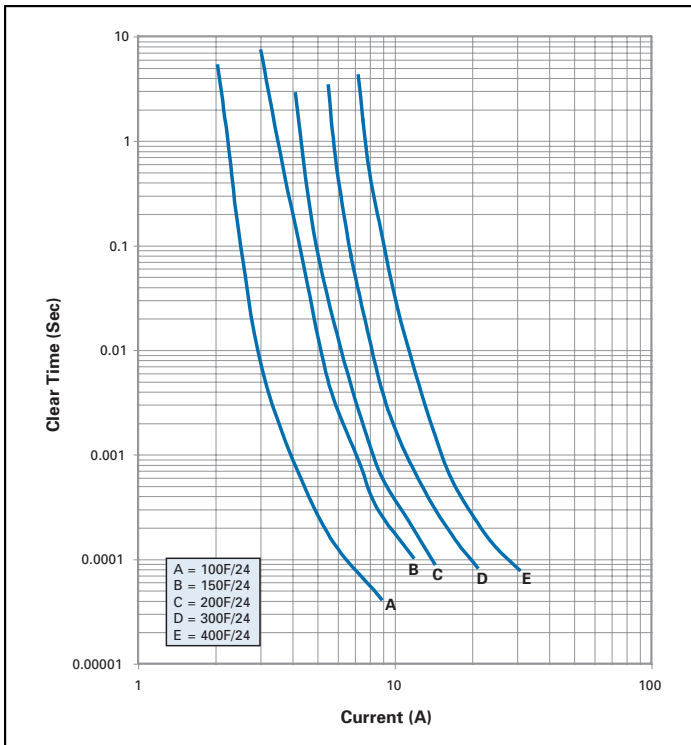
% of rated current	Clear time at 25°C
100%	4 hours min.
250%	5 seconds max.
400%	0.05 seconds max.

### Agency Approvals:

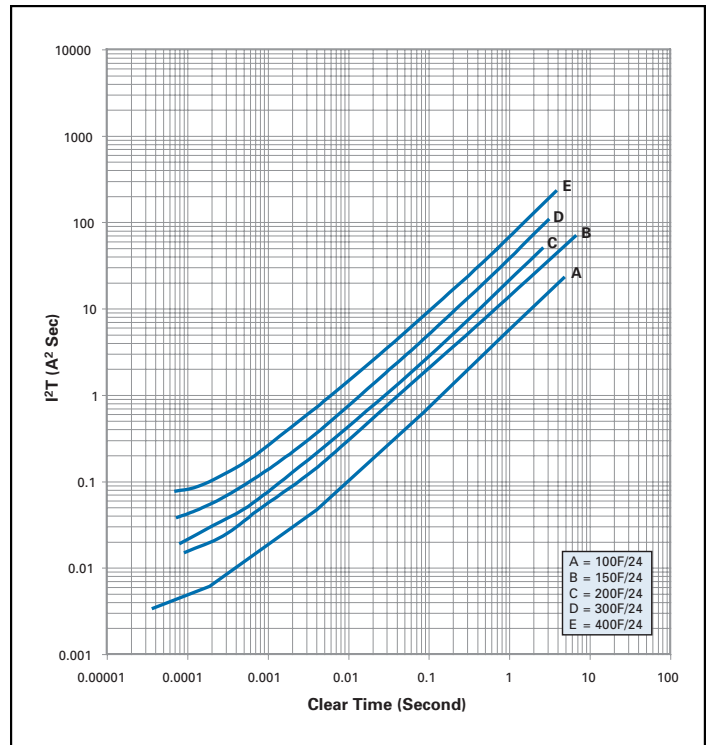
UL File# E197536

Family	Shape and Dimensions Inch (mm)	Recommended Land Patterns Inch (mm)	Part Number	Typical Electrical Characteristics <sup>1</sup>		Max Interrupt Ratings <sup>1</sup>	
				Rated Current (A)	Nominal Cold DCR <sup>2</sup> (Ω)	Voltage (V <sub>DC</sub> )	Current (A)
0402 (1005mm) Fast Acting Surface-mount Chip Fuses			Coming Soon 0402SFF025F/24	0.25	TBD	24	35
			Coming Soon 0402SFF038F/24	0.38	TBD		
			Coming Soon 0402SFF050F/24	0.50	TBD		
			Coming Soon 0402SFF075F/24	0.75	TBD		
			0402SFF100F/24	1.00	0.125		
			0402SFF150F/24	1.50	0.057		
			0402SFF200F/24	2.00	0.041		
			0402SFF300F/24	3.00	0.028		
			0402SFF400F/24	4.00	0.018		
			0603 (1608mm) Fast Acting Surface-mount Chip Fuses				
Coming Soon 0603SFF038F/32	0.38	TBD					
Coming Soon 0603SFF050F/32	0.50	TBD					
Coming Soon 0603SFF075F/32	0.75	TBD					
0603SFF100F/32	1.00	0.140					
0603SFF150F/32	1.50	0.070					
0603SFF200F/32	2.00	0.052					
0603SFF250F/32	2.50	0.035					
0603SFF300F/32	3.00	0.027					
0603SFF350F/32	3.50	0.025					
0603SFF400F/32	4.00	0.019					
0603SFF500F/32	5.00	0.014					
0603SFF600F/24	6.00	0.012	24				
1206 (3216mm) Fast Acting Surface-mount Chip Fuses			Coming Soon 1206SFF025F/125	0.25	TBD	63	50
			Coming Soon 1206SFF038F/125	0.38	TBD		
			Coming Soon 1206SFF050F/63	0.50	TBD		
			Coming Soon 1206SFF075F/63	0.75	TBD		
			1206SFF100F/63	1.00	0.220		
			1206SFF150F/63	1.50	0.120		
			1206SFF175F/63	1.75	0.100		
			1206SFF200F/63	2.00	0.050		
			1206SFF250F/32	2.50	0.037		
			1206SFF300F/32	3.00	0.032		
1206SFF400F/32	4.00	0.022					
1206SFF500F/32	5.00	0.018					
Coming Soon 1206SFF600F/24	6.00	TBD	32	45			
Coming Soon 1206SFF700F/24	7.00	TBD					
Coming Soon 1206SFF800F/24	8.00	TBD					

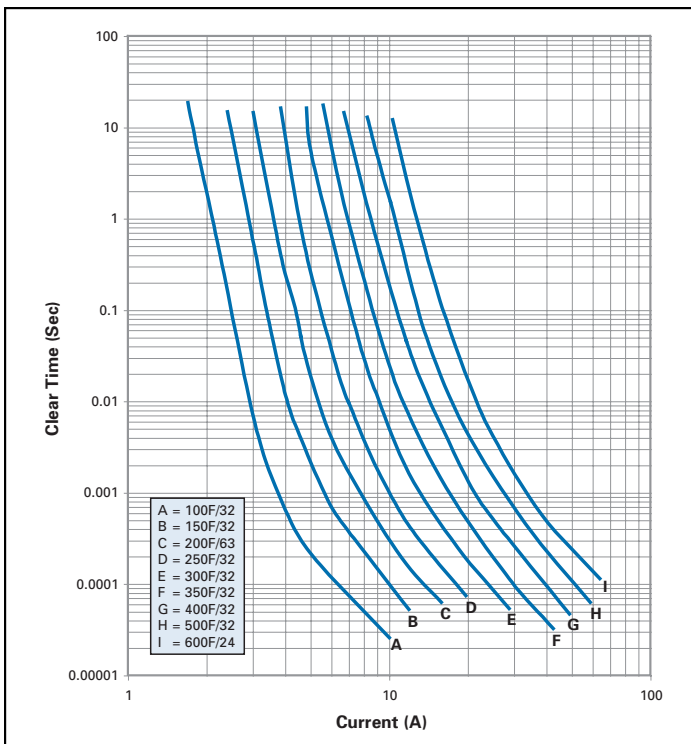
0402SFF Family Average Clear Time



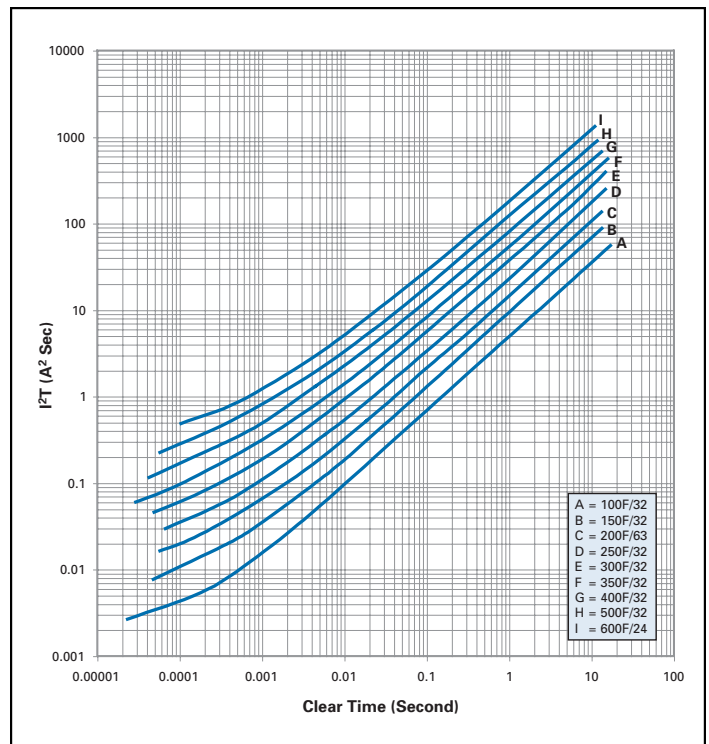
0402SFF Family I<sup>2</sup>T vs. Clear Time



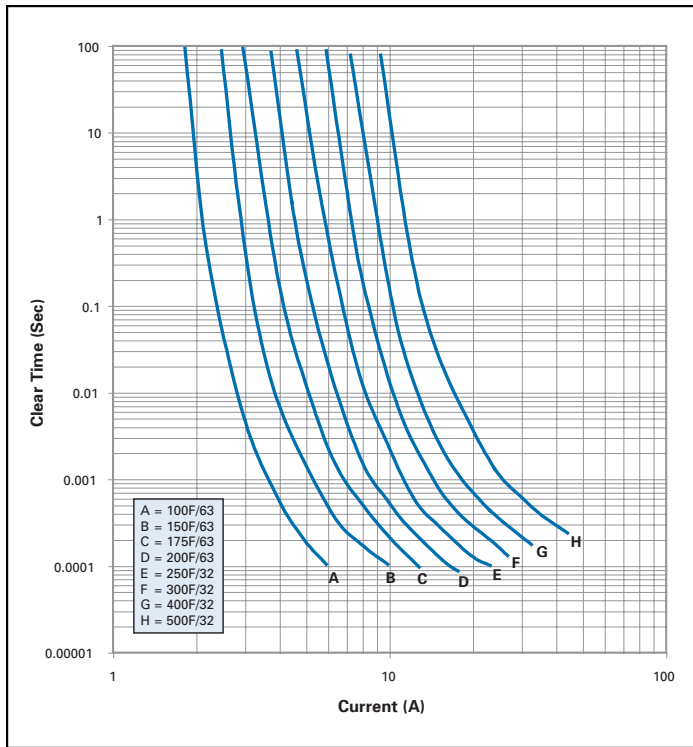
0603SFF Family Average Clear Time



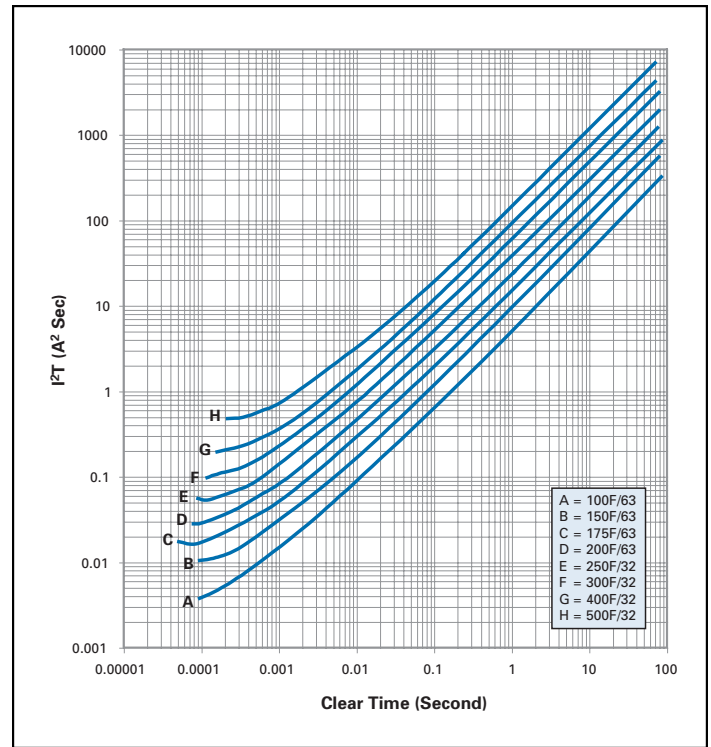
0603SFF Family I<sup>2</sup>T vs. Clear Time



1206SFF Family Average Clear Time



1206SFF Family I<sup>2</sup>T vs. Clear Time

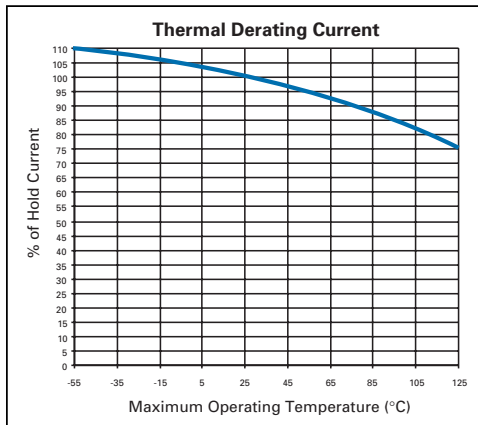


**Environmental Specifications**

Operating Temperature:	-55°C to +125°C
Mechanical Vibration:	Withstands 5-3000 Hz at 30 Gs when evaluated per Method 204 of MIL-STD-202
Mechanical Shock:	Withstands 1500 Gs, 0.5 millisecond half-sine pulses when evaluated per Method 213 of MIL-STD-202
Thermal Shock:	Withstands 100 cycles from -65°C to +125°C when evaluated per Method 107 of MIL-STD-202
Resistance to Soldering Heat:	Withstands 60 seconds at +260°C when evaluated per Method 210 of MIL-STD-202
Solderability:	Meets 95% minimum coverage requirement when evaluated per Method 208 of MIL-STD-202
Moisture Resistance:	Withstands 10 cycles when evaluated per Method 106 of MIL-STD-202
Salt Spray:	Withstands 48-hour exposure when evaluated per Method 101 of MIL-STD-202

**Material Specifications**

Construction Body Material:	Ceramic
Termination Material:	Silver, Nickel, Tin
Fuse Element:	Silver
Terminal Strength:	Hanging test: 0603: 0.5kg 30 seconds; 1206 1.5kg, 30 seconds; 0402 part types meet 2-pound push test



**Electrical Specifications**

Insulation Resistance after Opening:	20,000 ohms minimum
Current Carrying Capacity:	Withstands 100% rated current at +25°C ambient for 4 hours when evaluated per MIL-PRF-23419

**Packaging Specifications**

Chip Size	Parts on 7-inch (178 mm) Reel
0402 (1005)	10,000
0603 (1608)	4,000
1206 (3216)	3,000

**Worldwide Headquarters**

308 Constitution Drive, MS R21/2A  
Menlo Park, CA USA 94025-1164  
Tel (800) 227-7040  
(650) 361-6900  
Fax (650) 361-2508

[www.circuitprotection.com](http://www.circuitprotection.com)  
[www.circuitprotection.com.hk](http://www.circuitprotection.com.hk) (Chinese)  
[www.raychem.co.jp/polyswitch](http://www.raychem.co.jp/polyswitch) (Japanese)

**South America****Argentina**

Tel 54-11-4394-5150  
Fax 54-11-4326-9985

**Brazil**

Tel 55-11-5181-4788  
Fax 55-11-5181-4790

**Chile**

Tel 56-2-209-8211  
Fax 56-2-223-1477

**Colombia**

Tel 57-1-218-2460  
Fax 57-1-218-2472

**Peru**

Tel 51-1-221-4165  
Fax 51-1-421-0368

**Uruguay**

Tel 59-8-982-2428  
Fax 59-8-982-2430

**Venezuela**

Tel 58-2-242-6475  
Fax 58-2-241-8260

**Europe****UK/EIRE/****Nordic Countries**

Tel (32) 16-352028  
Fax (32) 16-351319

**Germany/Austria/  
Switzerland/****Eastern Europe**

Tel (49) 89-6089386  
Fax (49) 89-6089394

**France/Benelux/  
Italy/Iberia**

Tel (33) 1-34202114  
Fax (33) 1-34202324

**Other Countries**

Tel (32) 16-351321  
Fax (32) 16-351319

**Asia/Pacific****China, Beijing**

Tel 86-10-6581-5606  
Fax 86-10-6581-5608

**China, Guangzhou**

Tel 86-20-8330-9933  
Fax 86-20-8385-6139

**China, Hong Kong**

Tel 852-2738-3401  
Fax 852-2735-1185

**China, Shanghai**

Tel 86-21-6485-3288  
Fax 86-21-6485-5109

**India, Bangalore**

Tel 91-80-5112-1776  
Fax 91-80-2558-6039

**Japan**

Tel 81-44-900-5110  
Fax 81-44-900-5140

**Korea**

Tel 82-2-3415-4654  
Fax 82-2-3486-1786

**Malaysia**

Tel 6-04-611-2119  
Fax 6-04-644-9521

**Australia/Philippines**

Tel 63-2-848-0171  
Fax 63-2-867-8661

**Singapore**

Tel 65-6416-4205  
Fax 65-6484-0661

**Taiwan**

Tel 886-2-2662-9788  
Fax 886-2-2662-4684

**Thailand**

Tel 66-1-875-5758  
Fax 66-2-617-1939