

## CCF1F

## chip current fuses (anti-sulfuration)

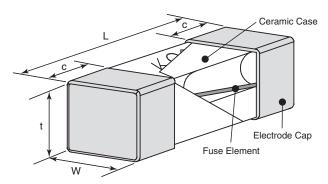




#### features

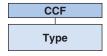
- Meets IEC60127-4 specifications (7A or less)
- Stable fusing characteristics due to original technology
- Suitable for reflow and flow soldering
- Products meet EU RoHS requirements
- Excellent anti-sulfuration characteristics due to using high sulfuration-proof material

#### dimensions and construction

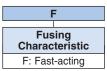


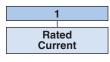
	Dimensions inches (mm)						
Туре	L	W	t	С			
CCF1F (2410)	.236±.008 (6.0±0.2)	.098±.008 (2.5±0.2)	.098±.008 (2.5±0.2)	.055±.008 (1.4±0.2)			

## ordering information









T					
Termination Surface Material					
T: Sn					

TE					
Packaging					
TE: 4mm pitch plastic embossed					
BK: Bulk					

## applications and ratings

Part Designation	Current Rating	Voltage Rating	Interrupting Capacity	sing teristics Fusing Time	Internal R. (mΩ) Max.	Normal Melting I²t (A², sec.)	Operating Temperature Range
CCF1F0.4	0.4A				650	0.024	
CCF1F0.5	0.5A				510	0.030	
CCF1F0.63	0.63A	UL(c-UL) AC 125V DC 125V	UL(c-UL) AC125V 50A DC125V 50A	4 hour min. 60 sec. max.	390	0.052	-55°C to +125°C
CCF1F0.8	0.8A				250	0.125	
CCF1F1	1A				90.4	0.156	
CCF1F1.25	1.25A				75.9	0.220	
CCF1F1.6	1.6A				59.3	0.513	
CCF1F2	2A				42.9	0.814	
CCF1F2.5	2.5A				36.6	1.31	

For further information on packaging, please refer to Appendix A.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

12/12/17



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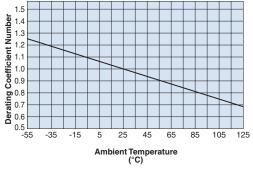
## chip current fuses (anti-sulfuration)

## applications and ratings (continued)

Part Designation	Current Rating	Voltage Rating	Interrupting Capacity	sing teristics Fusing Time	Internal R. (mΩ) Max.	Normal Melting I²t (A², sec.)	Operating Temperature Range
CCF1F3.15	3.15A		UL(c-UL) AC125V 50A DC125V 50A	4 hour min. 60 sec. max.	26.0	2.37	-55°C to +125°C
CCF1F4	4A				20.1	3.85	
CCF1F5	5A	UL(c-UL) AC 125V DC 125V UL(c-UL) AC 65V DC 65V			15.3	6.5	
CCF1F6.3	6.3A				11.4	10.6	
CCF1F7	7A				10.6	12.8	
CCF1F8	8A				9.5	17.0	
CCF1F10	10A				7.5	27.7	
CCF1F12	12A		UL(c-UL) AC65V 50A DC65V 50A		4.5	73.5	
CCF1F15	15A				3.5	125.5	

### environmental applications

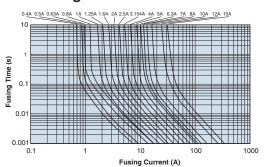
### **Derating Curve**



Stationary Current: Regard the peak of stationary current waveform as stationary current value when the stationary current is repeated pulse. Normal derating of this product should be 0.7max. as standards.

Deratings by ambient temperatures. When using the products at the temperatures other than normal temperature (25°C  $\pm$  5°), temperature adjustment will be required. Please refer the derating coefficient as shown in the figure.

#### **Fusing Characteristics**



#### **Performance Characteristics**

	Requirements				
Parameter	Limit	Typical	Test Method		
Fusing Characteristics	Within specified time. Insulation resistance shall not be less than 0.1M $\!\Omega$	_	Fusing time measured under rated current x 200%) (at 25°C)		
Surface Temperature Rise	Maximum temperature rise 75°C and not fusing (all the rating)		Surface temperature should be measured by 1.00/N		
Bending Test	No mechanical damage	_	Distance between holding points 90mm, bent by 3mm at rate of 1mm/second		
Resistance to Soldering Heat	ΔR±10%	±3%	260°C ± 5°C, 10 seconds ± 0.5 seconds		
Solderability	95% coverage minimum		235°C ± 5°C, 3 seconds ± 0.5 seconds		
Load Life	ΔR±10%	±5%	70°C ± 2°C, 1000 hours, rated current x 70%, 1.5 hr ON, 0.5 hr OFF cycle		
Load Life Moisture	ΔR±10%	±5%	40°C ± 2°C, 90 - 95% RH, 1000 hours, rated current x 70%, 1.5 hr ON, 0.5 hr OFF cycle		
Rapid Change of Temperature	ΔR±10%	±5%	-55°C (30 minutes), +125°C (30 minutes), 100 cycles		
Sulfuration Test	ΔR±10%		Soaked in industrial oil with 3.5% sulfur concentration, 105°C±3°C, 500 hours		

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10/29/20