
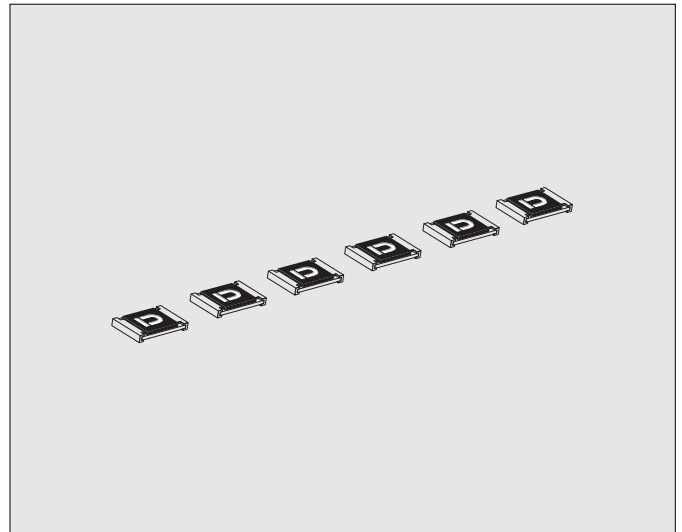


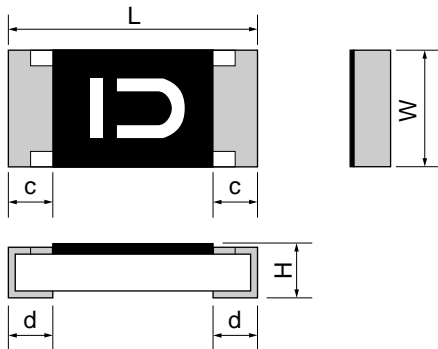
# FCCR10

## ●Features

1. Suitable for over-current protection of the circuit of miniature portable equipment.
2. Low internal resistance compared with FCC10AB series for low power consumption and voltage dropping.
3. Pb\*1, Halogen\*2 and Antimony\*3 free product
  - \*1 Pb ≤ 1000ppm
  - \*2 Cl or Br ≤ 900ppm, Cl+Br ≤ 1500ppm
  - \*3 Sb<sub>2</sub>O<sub>3</sub> ≤ 900ppm
4. Certified UL, c-UL.
  - File No. : E176847 
5. Major application
  - PC related equipment and peripherals (PC, Hard Drive, Printer etc.).
  - Small portable devices (Mobile phone, PDA Battery Charger etc.).
  - Digital Camera (Digital still camera).
  - Game equipment.
  - LCD monitors, LCD modules.



## ●Dimension



Current value is marked on the cover coating.  
Please refer to Ratings table on next page.

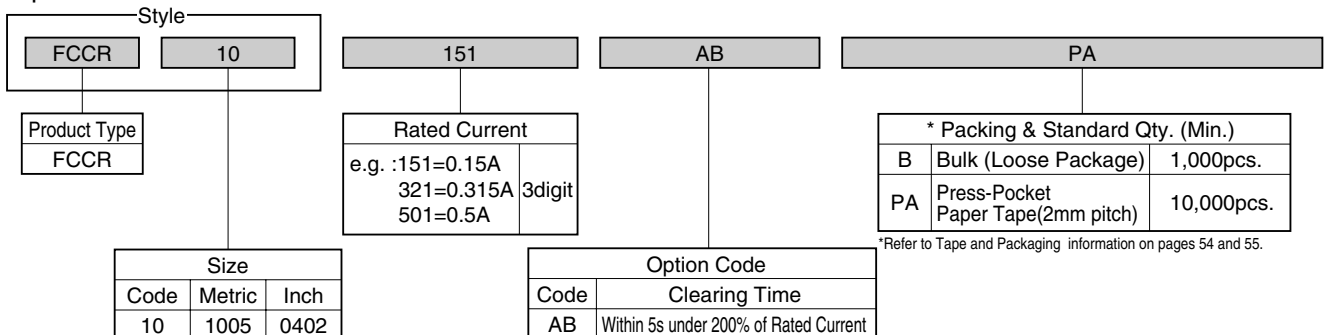
Unit : mm

Style	Metric	Inch	L	W	H	c	d	*Unit weight/pc.
FCCR10	1005	0402	1.0 ± 0.05	0.5 ± 0.05	0.4 ± 0.05	0.2 ± 0.1	0.25 ± 0.10	0.8mg

\*Values for reference

## ●Part Number Description

Example



**NEW** CHIP FUSES; RECTANGULAR TYPE

FCCR10

●Ratings/Option Code : AB (Fast-Acting type)

Size		Style	Rated Current		Internal Resistance m ohm max.	Mark	Interrupting Rating	Time / Current Characteristics	Working Temperature Range °C
Metric	Inch		Code	A					
1005	0402	FCCR10	151	0.15	1850	—	24Vd.c. 35A	Rated Current × 200% Opening time 5s Max.	-55~+125
			201	0.2	1250	Z			
			251	0.25	880	C			
			321	0.315	600	D			
			401	0.4	400	E			
			501	0.5	300	F			

●Performance Characteristics

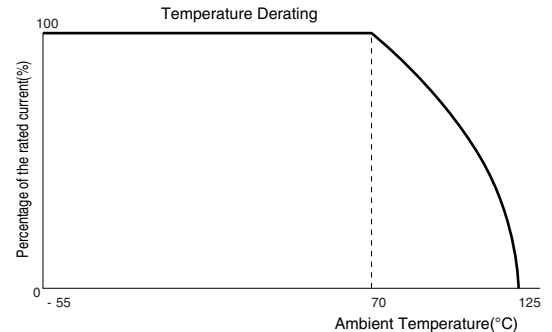
Description	Requirements	Test Methods
Carrying capacity	No fusing	Carrying Current : Rated current × 110%, 70°C, 1h.
Temperature rise on the surface	75°C max.	Ambient temperature : 10°C~30°C Carrying Current : Rated current
Bend strength of the face plating	No visible damage	IEC 60127-4 Clause 8.3 1mm/s, amount of bend : 3 mm
Solderability	At least 95% of the terminal surface must be covered by new solder	IEC 60127-4 Clause 8.5 Be immersed into solder at 235°C for 2s.
Resistance to soldering heat	No visible damage. Meet electrical requirement	IEC 60127-4 Clause 8.7 Be immersed into solder at 260°C for 10s.
Endurance (rated load)	The voltage drop shall not have increased by more than 10% of the value measured before the test	IEC 60127-4 Clause 9.4 At normal condition. Rated current ×1.05, 1h"ON", a quarter"OFF",100 cycles. Rated current ×1.25, 1h.

Note. Please contact KAMAYA for special applications.

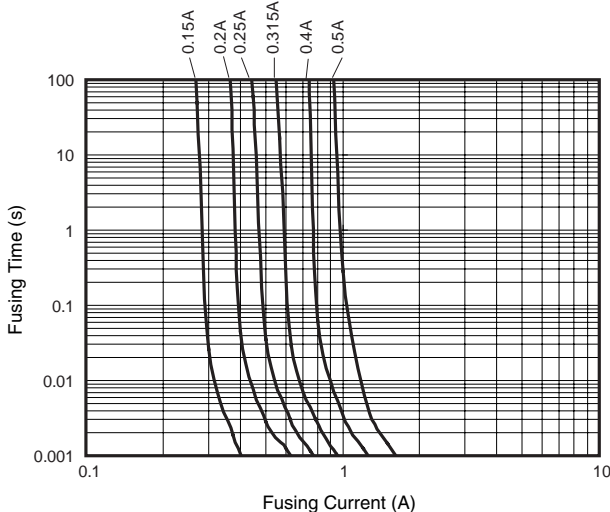
●Recommended Derating for Rated Current

- Nominal Derating  
Nominal Derating ≤ 75% of Rated Current
- Temperature Derating  
Please refer to the following graph regarding the current derating value for ambient temperature.

Ex.) If FCCR10 501AB (Rated Current:0.5A) is used under ambient temperature 70°C,  
Kamaya recommends, less than the current value derated as below,  
Rated Current : 0.5A × (Nominal Derating : 75% × Temperature Derating : 100%) = 0.375A



●Time / Current Characteristics



●Help Support of Fuse Selection

Please contact kamaya sales Dept, if you need to confirm In-rush Current endurance, Anti-pulse performance etc. We can provide Application Guide for FCCR10 selection.

Messrs\*\*\*  
Kamaya Electric Co., Ltd.  
Hokkaido Research Center  
No. 100-1000000

Verification of Chip Fuse Application

Series: FCCR	Application: 15 V d.c.
Size: 1005 (mm)	Rated Current: 20 A
Option Code: AB	Nominal: 0.2 A Max.
	Ambient: 70 deg.C Max.
	Rated Current: 1 A

Item for examination: Operating condition

PN	Size	Amp.	Fusing	Interrupting	Note
FCCR1005AB	1005	0.5 A	200% 5s	24 V d.c. 35A	Standing Pulse 100k times

Item for recommend

Confirmation for Interrupting

Rated Current	20 A
Voltage	15 V d.c. 24 V d.c. OK
Current	20% 100% OK

Confirmation for Derating

Nominal Derating	75%
Temperature Derating	100%

Basis of selection

#1	0.5 A Max.
#2	0.5 A Max.

Confirmations for Rush

Item	Value	Unit	Note
Rated Current	20 A	A	
Inrush Current	10 A	A	
Duration	5 μs	s	
Frequency	10 Hz	Hz	
Standing Pulse	100k times	times	

Confirmation of Rush

Item	Value	Unit	Note
Rated Current	20 A	A	
Inrush Current	10 A	A	
Duration	5 μs	s	
Frequency	10 Hz	Hz	
Standing Pulse	100k times	times	

Recommended Item: FCCR1005AB