
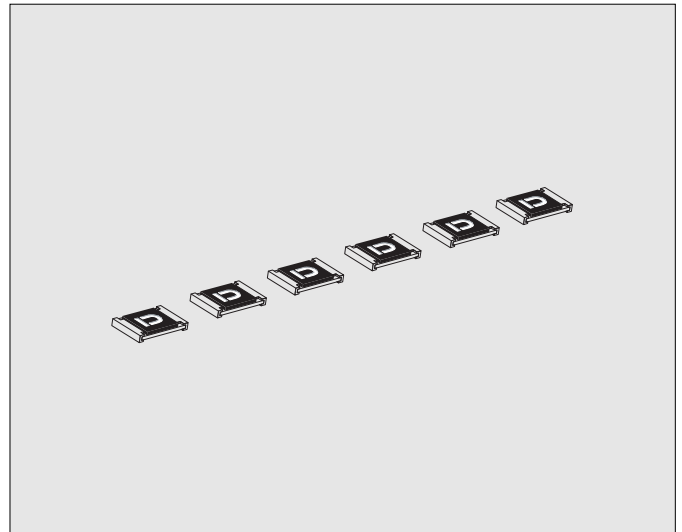


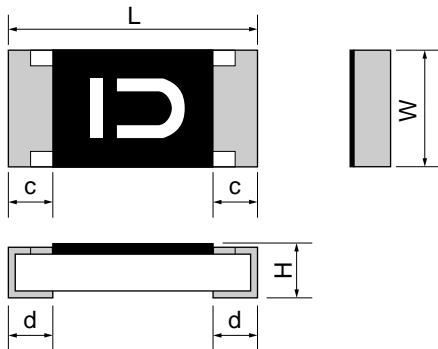
FCCR10

●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 Sb₂O₃ ≤ 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.

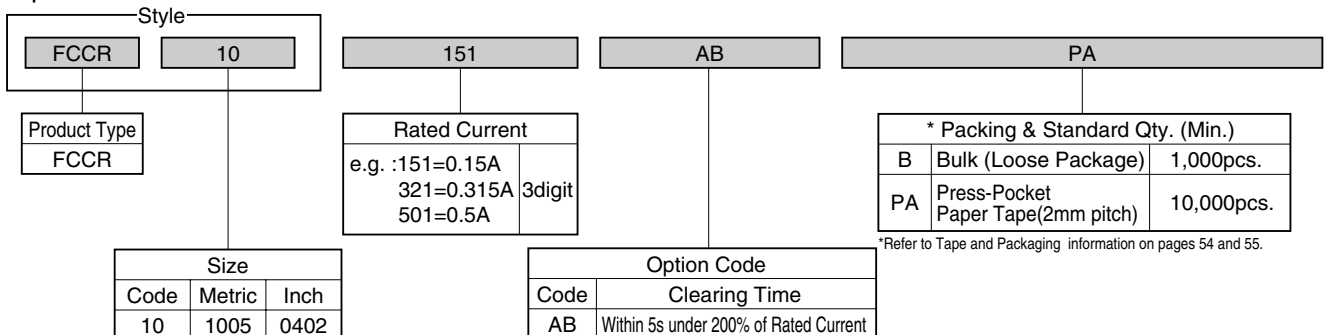
Unit : mm

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



*Refer to Tape and Packaging information on pages 54 and 55.

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

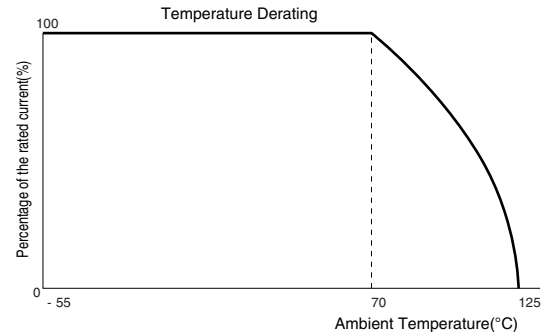
Description	Requirements	Test Methods
Carrying capacity	No fusing	Carrying Current : Rated current × 110%, 70°C, 1h.
Temperature rise on the surface	75°C max.	Ambient temperature : 10°C~30°C Carrying Current : Rated current
Bend strength of the face plating	No visible damage	IEC 60127-4 Clause 8.3 1mm/s, 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.

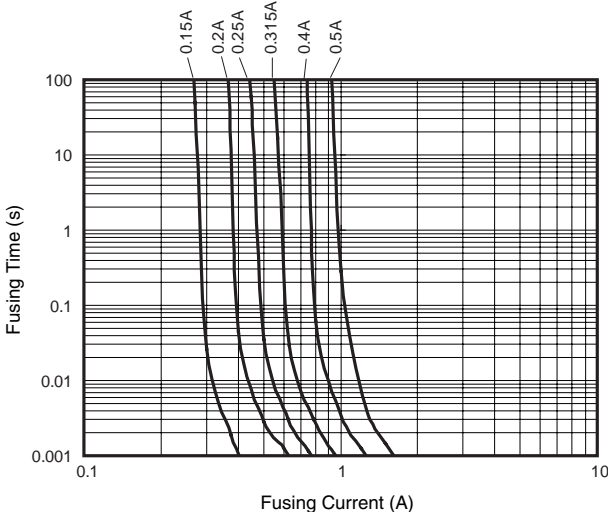
●Recommended Derating for Rated Current

- 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

Item for examination

Series	FCCR
Size	1005 (mm)
Option	AB

Operating condition

Application	15 V d.c.
Rated Current	20 A
Nominal Voltage	0.25 A Max.
Ambient	70 deg.C Max.
Altitude	1 A

Item for recommend

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

Confirmation for Interrupting

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

Confirmation for Derating

Nominal Derating	75%
Temperature Derating	100%

Basis of selection

Series	0.5A Max.
Size	0.5 A Max.

Confirmations for Rush

Item	Value	Unit
Rated Current	0.5 A	A
Rated Voltage	15 V d.c.	V
Rated Power	7.5 W	W
Rated Energy	10 J	J
Rated Time	200 μs	μs

Confirmation of Rush

Item	Value	Unit	Note	
#1	FCCR	10	501	AB
#2	Size	1005	0.5A	200% 5s
#3	Rated Current	0.5A	200% 5s	Standing Pulse 100k times
#4	Rated Voltage	15V d.c.	24V d.c. OK	
#5	Rated Power	7.5W	10W OK	

Recommended Item: FCCR1005AB