

# FCC FHC

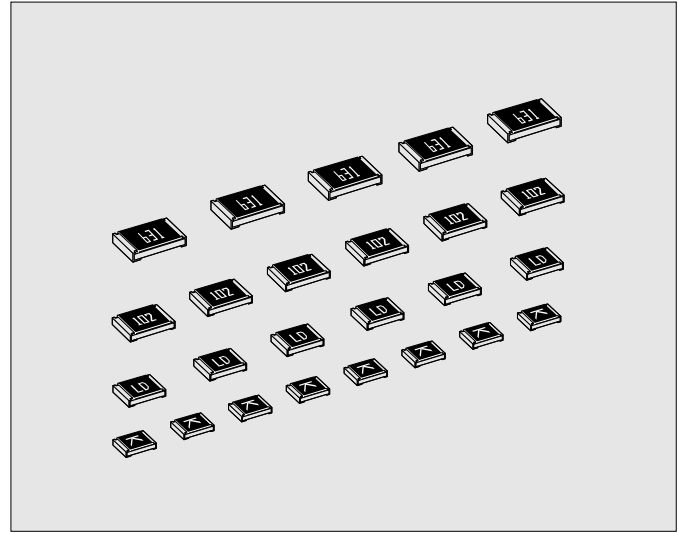
## •Features

1. Fast-Acting Type
2. Suitable for over-current protection of the circuit of miniture portable equipment.
3. 4 sizes available : from 0402 to 1206.
4. No smoke, no flame, at the fusing conditions.
5. Certified UL and c-UL.
  - File No.: E176847

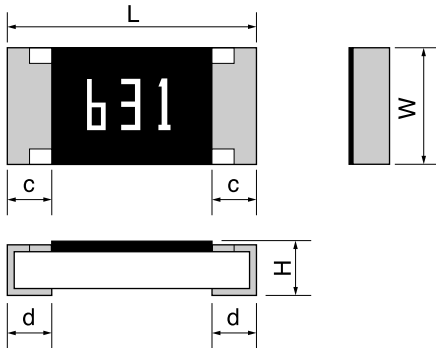


## 6. Major applications

- 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.



## •Dimensions



Current value is marked on the over coating.  
Please refer to Ratings Table on next page.

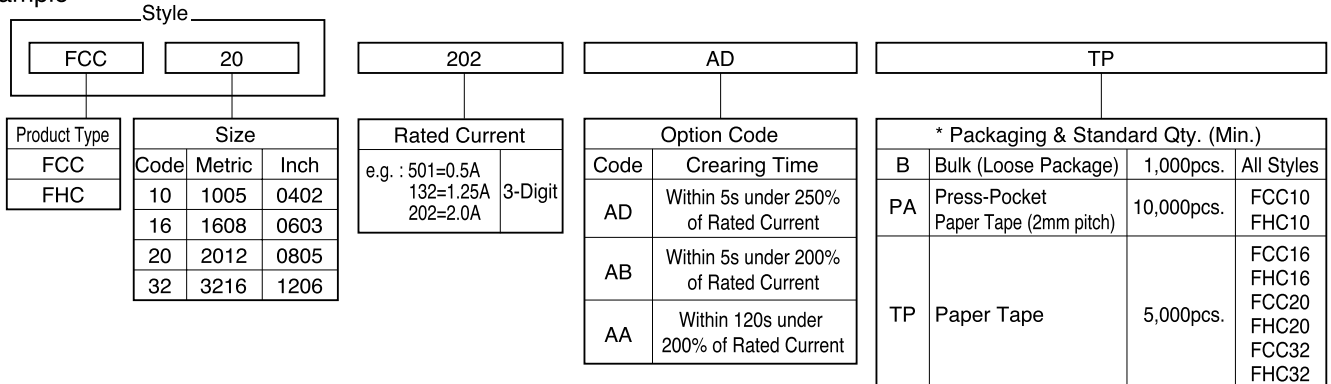
Unit : mm

Style	Metric	Inch	L	W	H	c	d	*Unit weight/pc.
FCC10	1005	0402	1.0±0.05	0.5 ±0.05	0.4 ±0.1	0.2±0.10	0.25±0.10	0.8mg
FHC10								
FCC16	1608	0603	1.6±0.1	0.8 <sup>+0.15</sup> <sub>-0.05</sub>	0.45±0.10	0.3±0.15	0.3 ±0.1	2mg
FHC16								
FCC20	2012	0805	2.0±0.1	1.25±0.10	0.6 ±0.1	0.4±0.2	0.4 ±0.2	6mg
FHC20								
FCC32	3216	1206	3.2±0.2	1.6 ±0.15	0.6 ±0.1	0.5±0.25	0.5 ±0.25	10mg
FHC32					0.65±0.10			11mg

\*Values for reference

## •Part Number Description

Example



\*Refer to Tape and Packaging information on pages 38 and 39.

CHIP FUSES; RECTANGULAR TYPE

FCC FHC

● Option Code : AD (Fast-Acting type)

Size		Style	Rated Current		Internal Resistance m ohm max.	Mark	Interrupting Rating	Time/Current Characteristics	Category Temperature Range °C					
Metric	Inch		Code	A										
1005	0402	FCC10	201	0.2	1,000	Z	24Vd.c. 35A	Rated Current ×250% Pre-acting time 5s max.	-55~+125					
			251	0.25	750	C								
			321	0.315	620	D								
			401	0.4	340	E								
			501	0.5	290	F								
			631	0.63	210	I								
			801	0.8	150	K								
		FHC10	102	1.0	120	L								
			132	1.25	90	M								
			162	1.6	55	N								
			202	2.0	40	S								
			252	2.5	36	T								
			322	3.15	26	U								
			1608	0603	FCC16	201				0.2	1,800	ZD	32Vd.c. 35A	Rated Current ×250% Pre-acting time 5s max.
251	0.25	1,000				CD								
321	0.315	750				DD								
401	0.4	330				ED								
501	0.5	280				FD								
631	0.63	200				ID								
801	0.8	130				KD								
102	1.0	110				LD								
132	1.25	85				MD								
162	1.6	70				ND								
FHC16	202	2.0			55	SD								
	252	2.5			45	TD								
	322	3.15			26	UD								
	402	4.0			19	XD								
2012	0805	FCC20	401	0.4	330	401	50Vd.c. 50A	Rated Current ×250% Pre-acting time 5s max.	-55~+125					
			501	0.5	270	501								
			631	0.63	190	631								
			801	0.8	130	801								
			102	1.0	100	102								
			132	1.25	80	132								
			162	1.6	65	162								
			202	2.0	55	202								
		FHC20	252	2.5	40	252								
			322	3.15	26	UD								
			402	4.0	19	XD								
			502	5.0	14	YD								
			3216	1206	FCC32	201	0.2			1,800	201	50Vd.c. 50A	Rated Current ×250% Pre-acting time 5s max.	-55~+125
						251	0.25			1,000	251			
321	0.315	750				321								
401	0.4	350				401								
501	0.5	295				501								
631	0.63	200				631								
801	0.8	140	801											
102	1.0	110	102											
132	1.25	85	132											
FHC32	152	1.5	78	152										
	162	1.6	75	162										
	202	2.0	65	202										
	252	2.5	45	252										
	322	3.15	26	UD										
	402	4.0	19	XD										
3216	1206	FHC32	502	5.0	14	YD	32Vd.c. 50A	Rated Current ×250% Pre-acting time 5s max.	-55~+125					
			502	5.0	14	YD								

Chip Fuses

● 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.

CHIP FUSES; RECTANGULAR TYPE

FCC FHC

● Option Code : AB (Fast-Acting type)

Size		Style	Rated Current		Internal Resistance m ohm max.	Mark	Interrupting Rating	Time/Current Characteristics	Category Temperature Range °C						
Metric	Inch		Code	A											
1005	0402	FCC10	251	0.25	1,000	C	24Vd.c. 35A	Rated Current ×200% Pre-acting time 5s max.	-55~+125						
			321	0.315	750	D									
			401	0.4	620	E									
			501	0.5	340	F									
			631	0.63	290	I									
			801	0.8	210	K									
			102	1.0	150	L									
			132	1.25	120	M									
			152	1.5	100	H									
			162	1.6	90	N									
		FHC10	202	2.0	55	S									
			252	2.5	40	T									
			1608	0603	FCC16	251				0.25	1,800	CB	32Vd.c. 35A	Rated Current ×200% Pre-acting time 5s max.	-55~+125
						321				0.315	1,000	DB			
401	0.4	750				EB									
501	0.5	330				FB									
631	0.63	280				IB									
801	0.8	200				KB									
102	1.0	130				LB									
132	1.25	110				MB									
152	1.5	95				HB									
162	1.6	85				NB									
FHC16	202	2.0			70	SB									
	252	2.5			40	TB									
	2012	0805			FCC20	501	0.5	330	FB	50Vd.c. 50A	Rated Current ×200% Pre-acting time 120s max.	-55~+125			
						631	0.63	270	IB						
801			0.8	190		KB									
102			1.0	130		LB									
132			1.25	100		MB									
162			1.6	80		NB									
202			2.0	65		SB									
FHC20			252	2.5		40	TB								

● Option Code : AA (Fast-Acting type)

Size		Style	Rated Current		Internal Resistance m ohm max.	Mark	Interrupting Rating	Time/Current Characteristics	Category Temperature Range °C
Metric	Inch		Code	A					
2012	0805	FCC20	501	0.5	270	501	50Vd.c. 50A	Rated Current ×200% Pre-acting time 120s max.	-55~+125
			631	0.63	190	631			
			801	0.8	130	801			
			102	1.0	100	102			
			132	1.25	80	132			
			162	1.6	65	162			
			202	2.0	55	202			
			252	2.5	40	252			

● Recommended Derating for Rated Current

• Nominal Derating

Option Code AD:Nominal Derating ≤ 80% of Rated Current

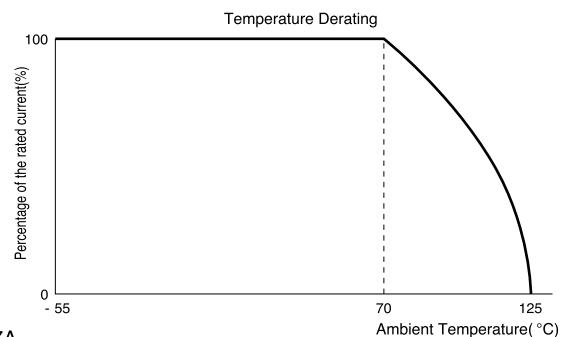
Option Code AB:Nominal Derating ≤ 70% of Rated Current

• Temperature Derating

Please refer to the following graph regarding the current derating value for ambient temperature.

Ex.) If FCC16 102AB (Rated Current:1.0A) is used under ambient temperature 70 °C, Kamaya recommends, less than the current value derated as below,

Rated Current : 1.0A × (Nominal Derating : 70% × Temperature Derating : 100%) = 0.7A

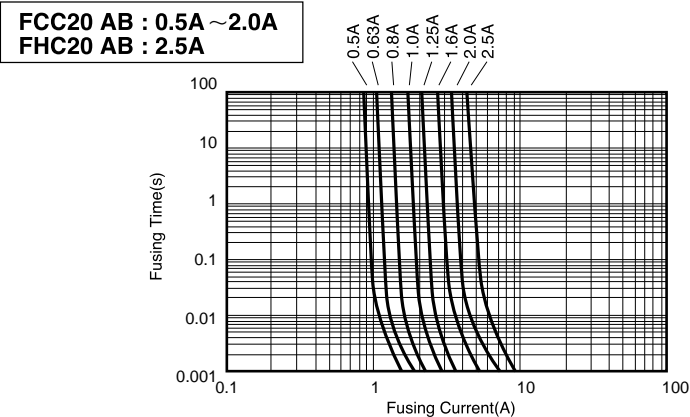
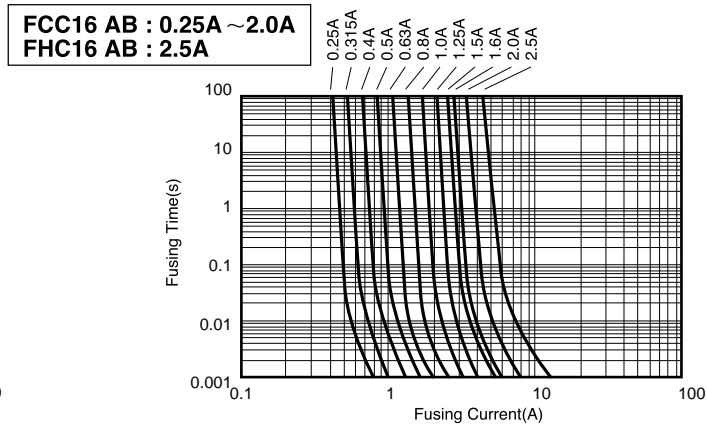
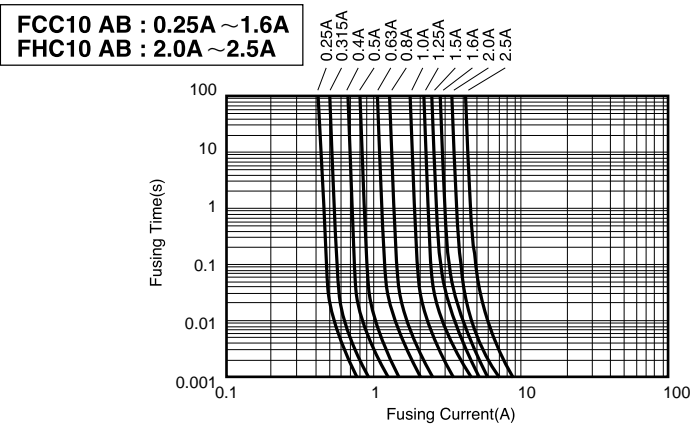
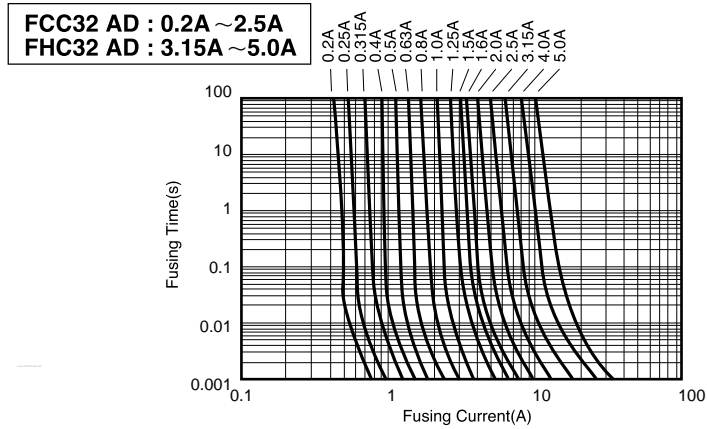
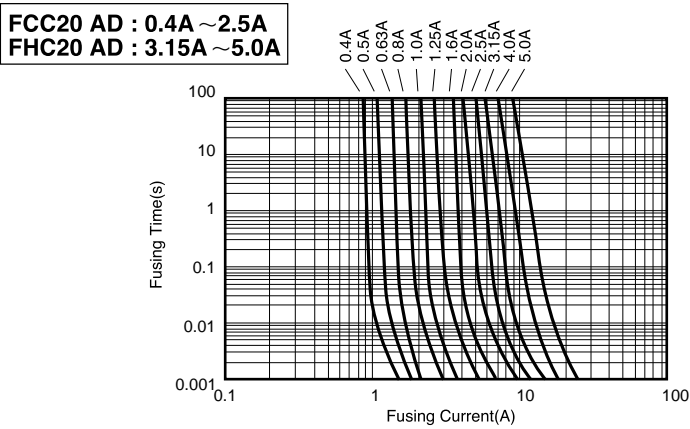
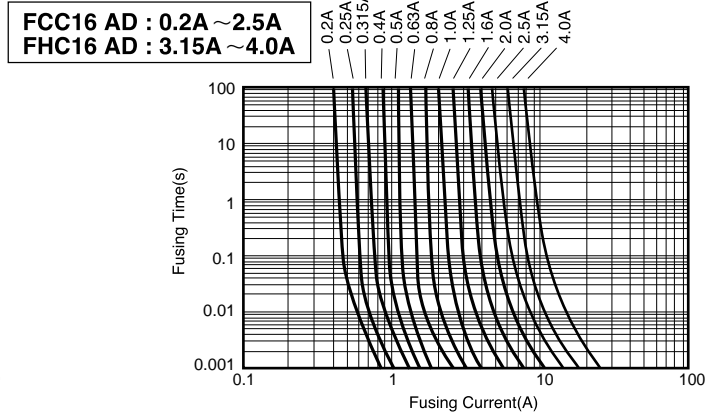
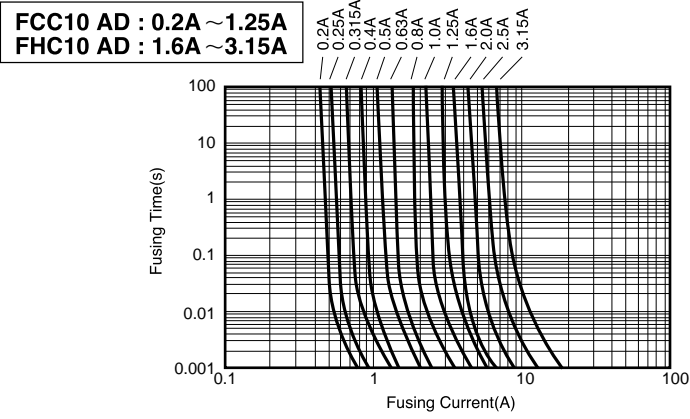


Please contact Kamaya Sale Dept, if you need to confirm Inrush current endurance, Anti-pulse performance etc.  
We can provide Application Guide for FCC, FHC selection.

CHIP FUSES; RECTANGULAR TYPE

FCC FHC

• Time / Current Characteristics



Chip Fuses