

## Precautions to use and how to select chip fuses

### TF series, CCP series and CCF series

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Product Management Center, KOA Corporation

Have you already selected your fuse based on the condition of current of your application?

You need to select your fuse properly.

Please note for the below precautions and make sure to ask us to select fuse products.

#### (1) Stationary Derating

Below product series require stationary derating. Stationary current value must be lower than the result of rated current multiplied by stationary derating coefficient.

Parts Number	Stationary Derating Coefficient
CCF1N	0.7
CCF1F	0.7
TF16AT	0.75

#### (2) Stationary Current

When the stationary current includes pulse characteristic, you have to use the peak current value to select a fuse.

Stationary current value of the circuit can be calculated with the following equation.

Stationary current value of the circuit  $\leq$  Rated current value  $\times$  Stationary derating coefficient  
 $\times$  Ambient temperature derating coefficient

\* If you use the effective value as current value to select a fuse, fusing may happen unexpectedly.

#### (3) Coating, potting or molding after mounting product can change the fusing characteristics.

**Please make sure to confirm the characteristics by actual machine.**

#### (4) For selecting a fuse, please confirm the necessary information on the next page and ask us via below inquiry form.

Necessary information:

1. Voltage of power supply
2. Stationary current value and stationary current waveform  
(absolutely necessary if the current includes pulse characteristics)
3. Inrush current waveform and application frequency
4. Ambient temperature of fuse at operation, etc.

Inquiry form

<https://www.koaglobal.com/contact/productsForm>

#### (5) If your circuit condition has been changed once after you have selected fuse, you have to select again.

We have more detail documents ( $I^2t$ -t characteristic graph, selection manuals, etc) regarding selecting fuse products. Please confirm the contents when you consider using our fuse products. Please contact the above e-mail address when you require the documents.

Please complete the necessary information below.

\* Red is required item.

Parameter	Specification	Unit	Value
<b>Voltage</b>	Circuit voltage (Voltage applied to fuse at fusing)	V (AC/DC)	
<b>Stationary current</b>	Current value constantly impressed to fuse (Use peak value for pulse waveform)	A (AC/DC)	
<b>Inrush current</b>	Inrush current waveform (Please paste the image of your waveform under this table)	(Waveform) A (seconds)	
<b>Operating temp. range</b>	Temperature around fuse at operation	°C	
<b>Starting current</b>	Transient current value at operation until the current reaches the stationary current	A (seconds)	
<b>Abnormal current</b>	Current value at abnormality when fuse requires fusing	A (seconds)	
<b>Size</b>	Size	mm	
<b>Product lofe</b>	Estimated operating hours per day and required years to use	(hours)	
<b>Application</b>			
<b>Approvals</b>	UL    CSA    PSE    IEC	Approval number	

Paste the image of your waveform below.