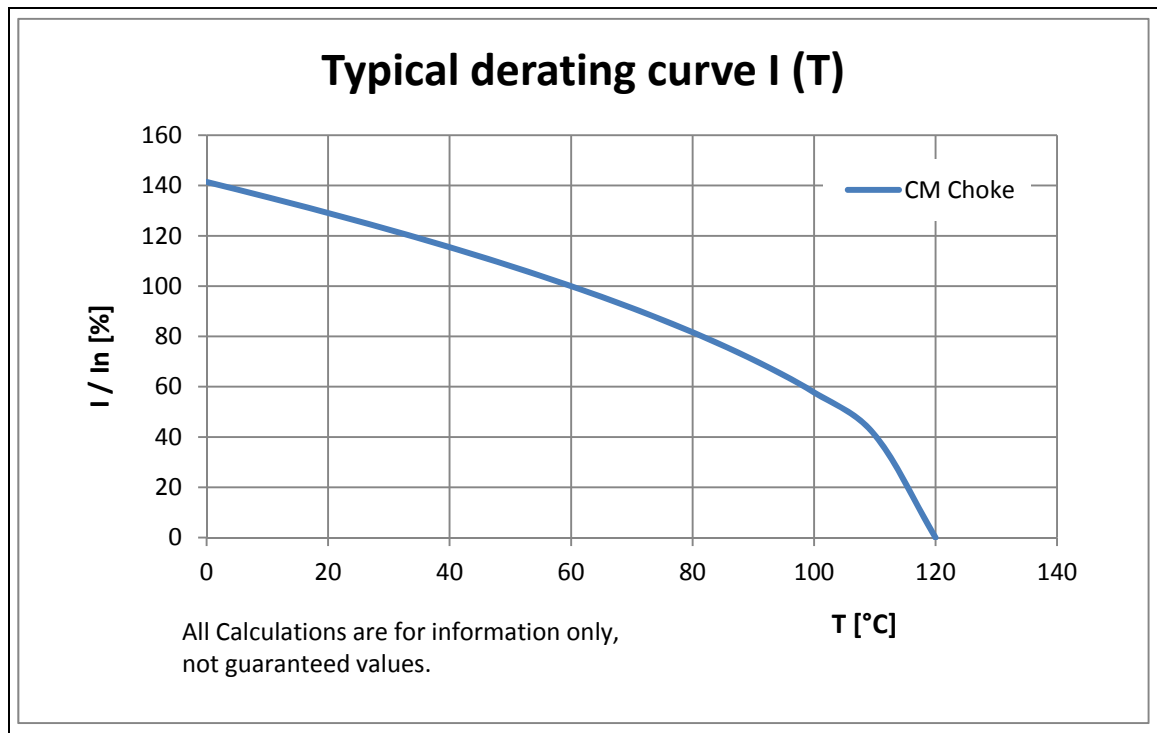


Derating over Temperature



Derating curve for nominal current normalized to 60°C

The nominal currents stated for our components refer to an ambient temperature of 60°C (or 70°C) - as indicated on the component data-sheet. Without any further indication free convection is assumed.

The maximum operating current at any other ambient temperature can be calculated by means of the following formula

$$I = I_{nom} \sqrt{\frac{T_{max} - T}{T_{max} - T_{nom}}}$$

where I_{nom} = rated current at T_{nom}
 T = actual ambient temperature
 T_{nom} = temperature at which the rated current is defined
 T_{max} = rated maximum temperature of the choke

Example CMC MB-007:

$I_{nom} = 16A$, $T_{nom} = 60^{\circ}C$

At $T = 40^{\circ}C$ the max. operating current I can be ca. 18,5 A, at $T = 80^{\circ}$ it can be ca. 13 A only.

If forced cooling is applied to the component operating current can be increased by ca. 40%.

Note: All these figures are estimations and in particular overtemperature has to be verified by testing in the real application.

For further information pls. contact us.

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