

Microchip**Filter specification****TFS 840C****1/5****Measurement condition**

| | | |
|-----------------------------|----|----------|
| Ambient temperature T_A : | 23 | °C |
| Input power level: | 0 | dBm |
| Terminating impedance: | | |
| Input: | 50 | Ω |
| Output: | 50 | Ω |

Characteristics

Remark:

The reference level for the relative attenuation a_{rel} of the TFS840C is the maximum attenuation in the pass band. The maximum attenuation in the pass band is defined as the insertion loss a_e . The nominal frequency f_N is fixed at 840.5 MHz without any tolerance or limit. The values of relative attenuation a_{rel} are guaranteed for the whole operating temperature range. The frequency shift of the filter in the operating temperature range is included in the production tolerance scheme.

| D a t a | | typ. value | tolerance / limit | | |
|---|-----------|-------------------|--------------------------|-------|-----|
| Insertion loss | a_e | 3.6 | max. | 5.0 | dB |
| Nominal frequency | f_N | - | | 840.5 | MHz |
| Passband | PB | - | $f_N \pm$ | 28.5 | MHz |
| Pass band ripple | p-p | 0.7 | max. | 1.0 | dB |
| Pass band variation | | 1.5 | max. | 2.0 | dB |
| Relative attenuation | a_{rel} | | | | |
| 0.3 MHz ... 715 MHz | | 27 | min. | 25 | dB |
| 965 MHz ... 1680 MHz | | 29 | min. | 25 | dB |
| 1680 MHz ... 1865 MHz | | 40 | min. | 35 | dB |
| Group delay ripple within PB | p-p | 8* | max. | 16 | ns |
| Return loss | | 11 | min. | 7 | dB |
| Input power level | | - | max. | 10 | dBm |
| Operating temperature range | OTR | - | -40 °C ... +85 °C | | |
| Storage temperature range | | - | -40 °C ... +85 °C | | |
| Temperature coefficient of frequency | TC_f ** | -71 | ppm/K | | - |

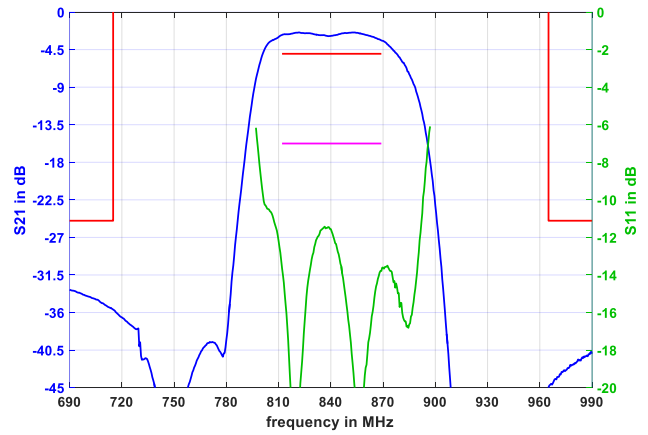
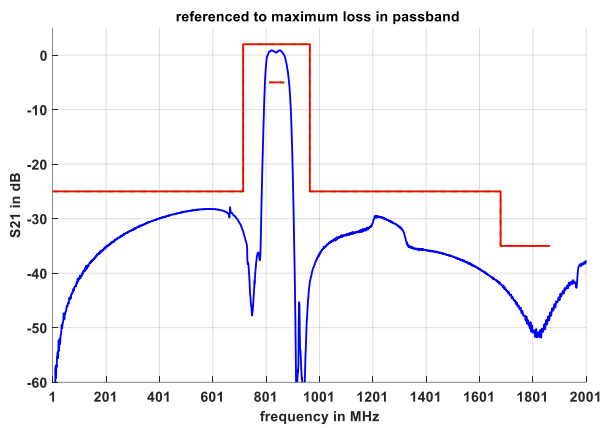
*) typical value is 5ns p-p group delay ripple after 3rd order detrend

) $\Delta f = TC_f(T - T_A)f_N$ **Generated:**Checked / Approved:**

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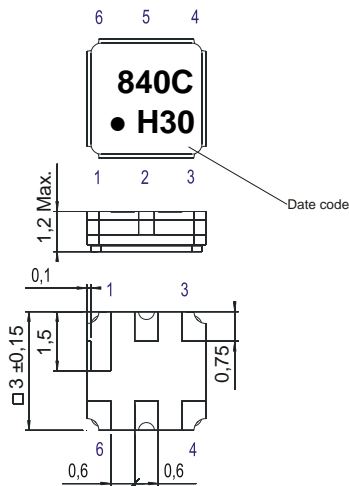
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Filter characteristic



Construction and pin connection

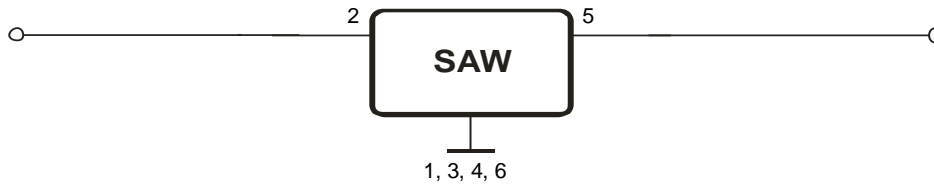
(All dimensions in mm)



| | |
|---|--------|
| 1 | Ground |
| 2 | Input |
| 3 | Ground |
| 4 | Ground |
| 5 | Output |
| 6 | Ground |

Date code: Year + week
 H 2016
 J 2017
 K 2018
 ...

50 Ω Test circuit



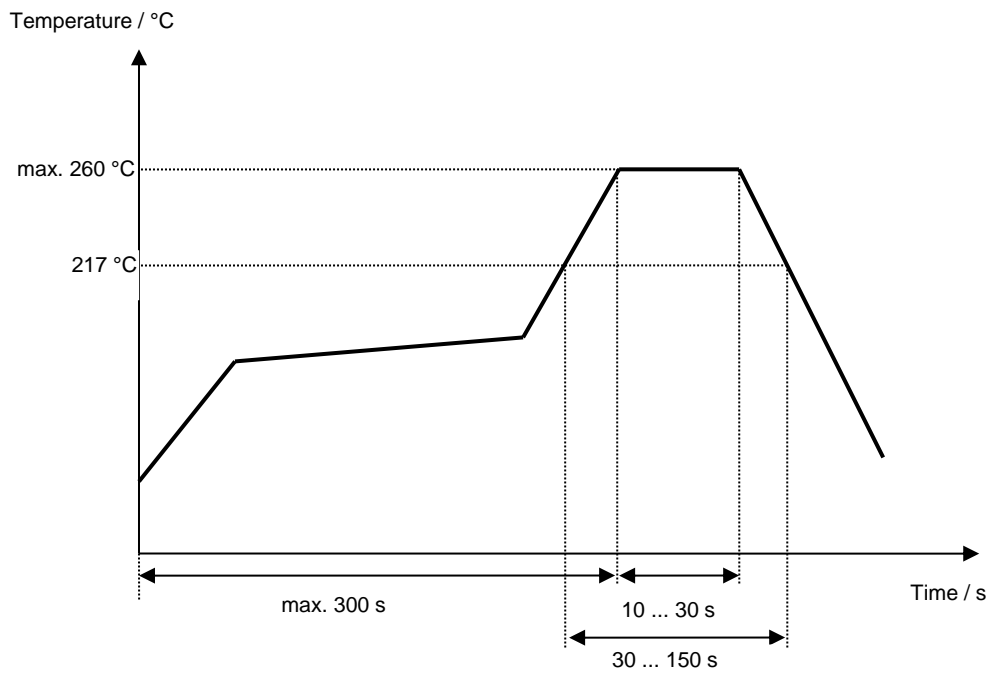
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Air reflow temperature conditions

| Conditions | Exposure |
|---|-----------------------------|
| Average ramp-up rate (30 °C to 217 °C) | less than 3 °C / second |
| > 100 °C | between 300 and 600 seconds |
| > 150 °C | between 240 and 500 seconds |
| > 217 °C | between 30 and 150 seconds |
| Peak temperature | max. 260 °C |
| Time within 5 °C of actual peak temperature | between 10 and 30 seconds |
| Cool-down rate (Peak to 50 °C) | less than 6 °C / second |
| Time from 30 °C to Peak temperature | no greater than 300 seconds |

Chip-mount air reflow profile



Microchip**Filter specification****TFS 840C****5/5**

History

| Version | Reason of Changes | Name | Date |
|----------------|--|---------------|-------------|
| 1.0 | - Generation of development specification | Strehl | 18.01.2008 |
| 1.1 | - Generation of filter specification | S.Springfeldt | 11.09.2008 |
| 2.0 | - Formal corrections (data table) - Change of tape and reel direction | S.Springfeldt | 21.07.2016 |

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