

Features

- SMD duplexer consisting of coupled resonators with stepped impedances
- $\text{Ba}(\text{NdSm})\text{TiO}_3$ ($\epsilon_r = 82$ / $TC_f = 0 \pm 10$ ppm/K)
- Excellent reflow solderability

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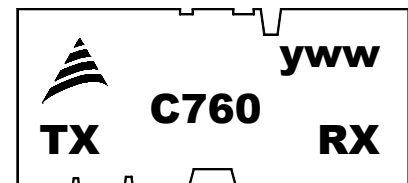
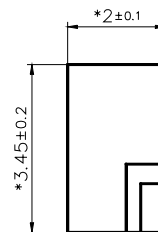
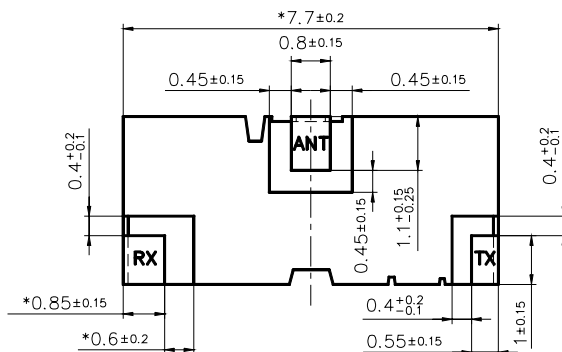
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Preliminary Data Sheet

Component drawing

marking

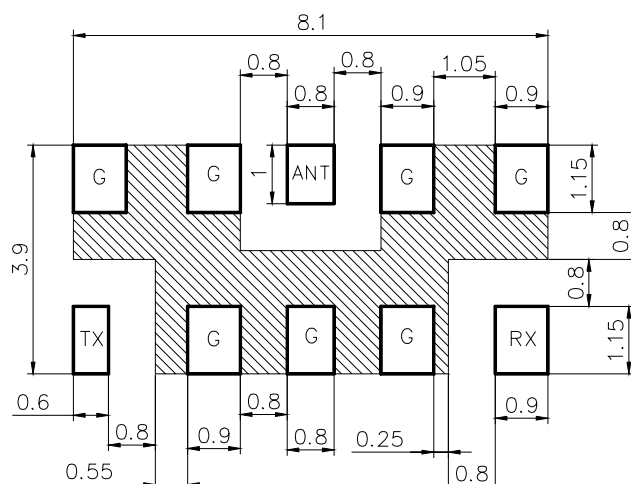


y= calendar year
w= calendar week
e.g.: 427= calendar year 2004,
calendar week 27

*depending in final pressing tool

View from below onto the solder terminals and view from beside

Recommended footprint



TX, RX, ANT, G solder pads



ground area below solder resist with vias
to second ground layer

I/O

connected to lines with an impedance of
50 Ohm

Standard
condition

FR4 material
permittivity : 4.4
preferred thickness : 0.3
Vias: $\varnothing 0.3 \text{ mm} / \text{mm}^2$
For other thickness
correlation might be necessary

Preliminary Data Sheet
Characteristics Receiver

		min.	typ.	max.	
Center frequency	f_C	-	2140	-	MHz
Insertion loss	α_{IL}		1.3	1.6	dB
Passband	B	60			MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$			0.9	dB
Standing wave ratio	SWR			1.9	
Impedance	Z		50		Ω
Power	P_{avg}			0.8	W
Attenuation	α				
	at DC to 1790 MHz	35 *			dB
	at 1790 to 1920 MHz	30			dB
	at 1920 to 1980 MHz	50			dB
	at 1980 to 2025 MHz	20			dB
	at 4030 to 4150 MHz	23 *			dB
	at 5950 to 6000 MHz	33 *			dB

*depending on final pressing tool and final layout

Characteristics Transmitter

		min.	typ.	max.	
Center frequency	f_C	-	1950	-	MHz
Insertion loss	α_{IL}		1.1	1.4	dB
Passband	B	60			MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$			0.6	dB
Standing wave ratio	SWR			1.8	
Impedance	Z		50		Ω
Power	P_{max}			1.0	W
Attenuation	α				
	at DC to 1000 MHz	40			dB
	at 2110 to 2170 MHz	42			dB
	at 2400 to 2550 MHz	40			dB
	at 3840 to 3960 MHz	33 *			dB
	at 5760 to 5940 MHz	23 *			dB

*depending on final pressing tool and final layout

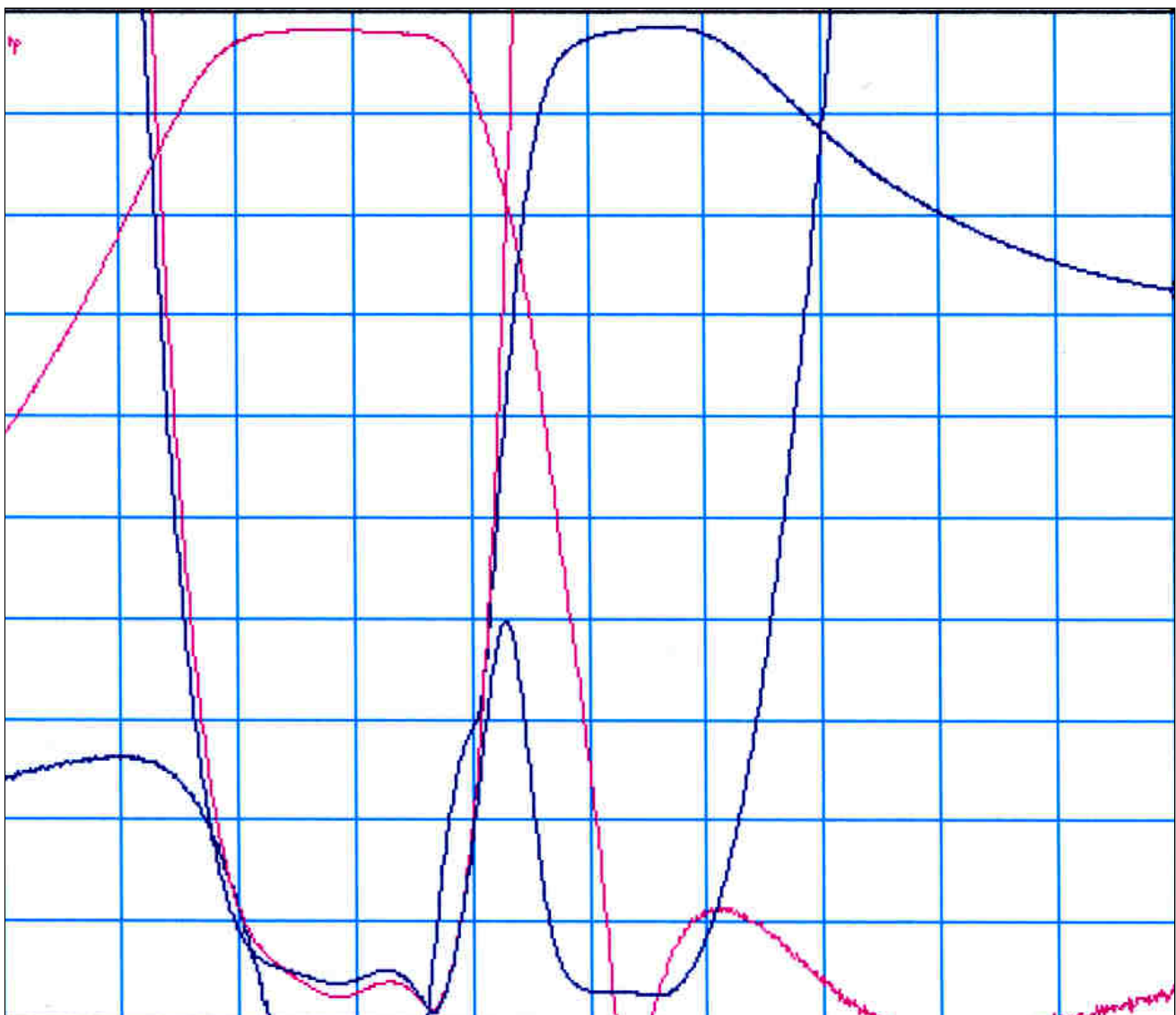
Isolation Tx – Rx

		min.	typ.	max.	
Attenuation	α				
	at 1920 to 1980 MHz	50			dB
	at 2110 to 2170 MHz	45			dB

Maximum ratings

IEC climatic category (IEC 68-1)	- 40/+ 90/56	
Operating temperature	T_{op} -40 / +85	°C

Typical passband characteristic

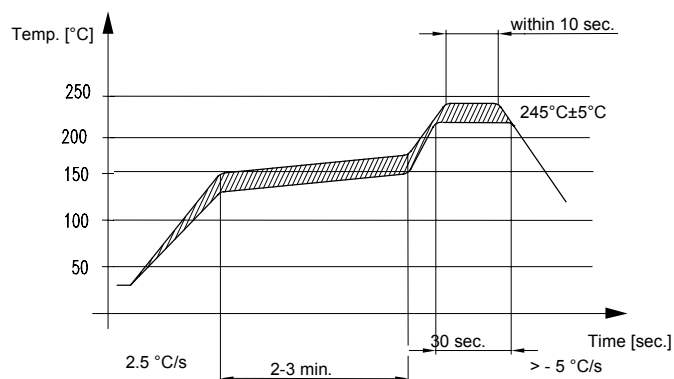
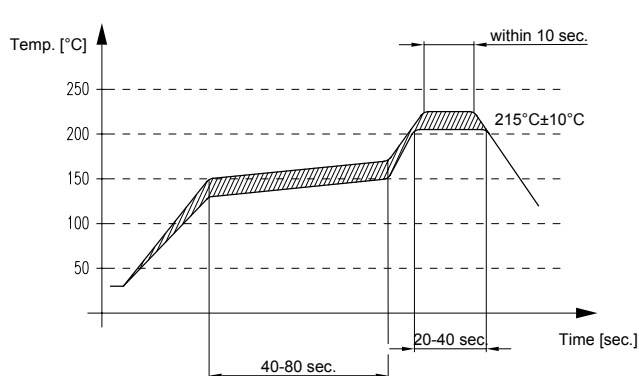


Preliminary Data Sheet
Processing information

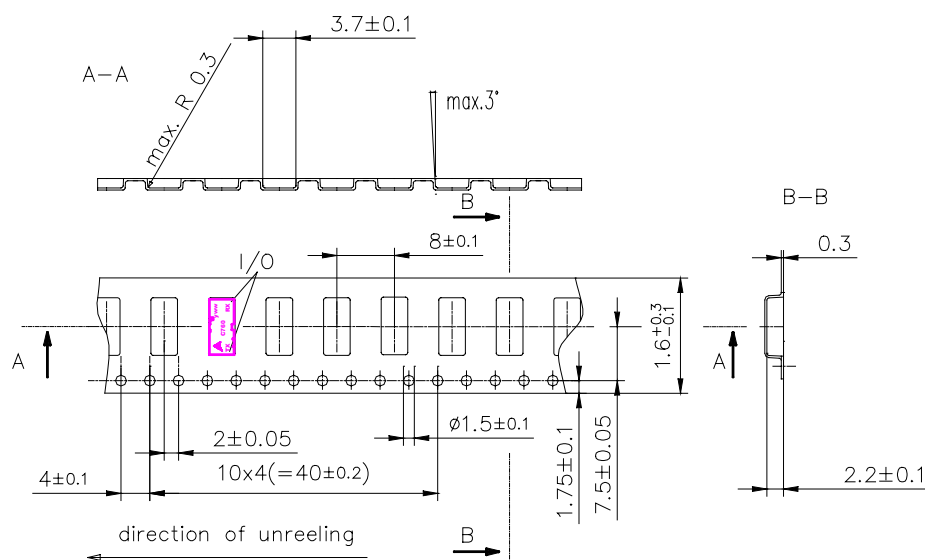
- Wettability to IEC 68-2-58: $\geq 75\%$ (after aging)

Soldering Requirements

	Profile for eutectic SnPb solder paste	Profile for leadfree solder paste	
Soldering type	reflow	reflow	
Maximum soldering temperature (measuring point on top surface of the component)	235 (max. 2 sec.) 225 (max. 10 sec.)	260 (max. 2 sec.) 250 (max. 10 sec.)	°C °C

Recommended soldering conditions (infrared):

Delivery mode

- Blister tape acc. to IEC 286-3, polyester, grey
- Pieces/tape: 3000



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