

Ø 5 mm Film Dielectric Trimmers



FEATURES

- Housing diameter 5 mm
- Top and bottom or top adjustment
- Round head
- Mounting: radial
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?99912

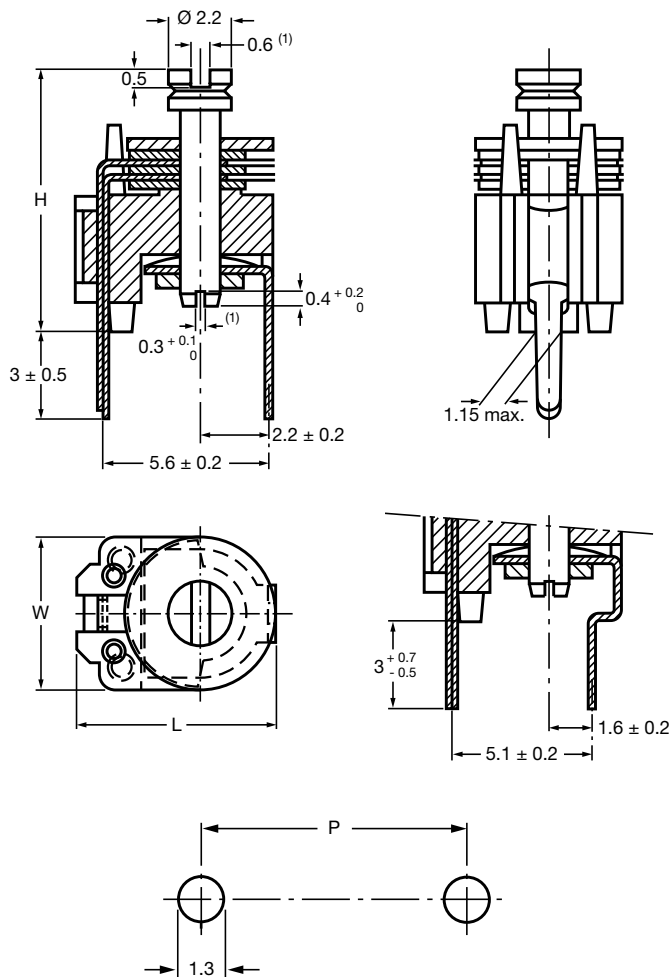

RoHS
COMPLIANT

APPLICATIONS

- Impedance matching circuits
- RF
- Medical
- For consumer and industrial equipment

QUICK REFERENCE DATA

Rated DC voltage	150 V _{DC}	
Test DC voltage for 1 min	300 V _{DC}	
Maximum contact resistance	10 mΩ	
Minimum insulation resistance	10 000 MΩ	
Category temperature range	PP	-40 °C to +70 °C
	PTFE	-40 °C to +85 °C
Climatic category (IEC 60068)	PP	40/070/21
	PTFE	40/085/21
Minimum storage temperature	-55 °C	
Related specification	IEC 60418-1 and 4	
Effective angle of rotation	180° (rotation in 180° only, see "Life of Trimmer")	
Operating torque	C _{max.} < 20 pF	1 mNm to 15 mNm
	C _{max.} ≥ 20 pF	1 mNm to 25 mNm
Maximum axial thrust	2 N	
Capacitance range (C _{min.} / C _{max.})	0.35 pF / 1.5 pF to 4 pF / 27 pF	
Life of trimmer	Maximum 10 cycles: rotation in 180° only (the electrical and mechanical performance is not guaranteed if rotated beyond 10 cycles)	
Quality level	Sampling and data evaluation for quality level in accordance with "MIL-STD-105D" and "IEC 60410":	
	< 0.15 % major defects < 0.65 % minor defects Each capacitor is tested for minimum C _{max.} and is also subjected to the full test voltage.	

DIMENSIONS in millimeters


Hole pattern

Trimmers BFC2 808 series, with round head

CAPACITANCE AND RELEVANT PHYSICAL DIMENSIONS			
$C_{\min.} / C_{\max.}$ (pF)	$H_{\max.}$ (mm)	$W_{\max.}$ (mm)	$L_{\max.}$ (mm)
0.35 / 1.5	7.0	5.5	7.3
1.5 / 5	7.0	5.5	7.3
3 / 10	7.0	5.5	7.3
3 / 15	8.8	5.5	7.3
4 / 20	8.8	5.5	7.3
4 / 27	9.0	6.2	7.8

**MOUNTING**

The trimmer has a lead pitch of 5.08 mm or 5.6 mm and can be mounted on printed-circuit boards with a minimum hole diameter of 1.25 mm.

PACKAGING

Bulk packaged in cardboard boxes lined with expanded plastic, 1000 units per box.

ORDERING INFORMATION

$C_{min.} / C_{max.}$ (pF)	CATALOG NUMBER BFC2 808		
	TOP AND BOTTOM ADJUSTMENT (P = 5.6 mm)	TOP ADJUSTMENT ONLY (P = 5.6 mm)	TOP ADJUSTMENT ONLY (P = 5.08 mm)
POLYTETRAFLUORETHYLENE			
0.35 / 1.5	22158	-	-
POLYPROPYLENE			
1.2 / 5	-	24508	-
1.5 / 5	23508	-	20508
1.5 / 7	-	24708	-
3 / 10	23109	-	20109
3 / 15	23159	-	20159
4 / 20	23209	-	20209
4 / 27	23279	-	20279

ELECTRICAL DATA

GUARANTEED MAX. $C_{min.}$ / MIN. $C_{max.}$ AT 200 kHz (pF)	$\tan \delta$ AT $C_{max.} \times 10^{-4}$		TEMP. COEFF. ⁽¹⁾ ($10^{-6}/K$)	MIN. f_{res} AT $C_{max.}$ (MHz)	COLOR OF BASE	SMALLEST PACKAGING QUANTITY	CATALOG NUMBER BFC2
	1 MHz	100 MHz					
0.35 / 1.5	≤ 10	-	-450 ± 550	-	-	1000	 808 22158
1.2 / 5	≤ 10	-	-200 ± 550	-	Grey	1000	 808 24508
1.5 / 5	≤ 10	≤ 25	-200 ± 550	700	Grey	1000	 808 20508 808 23508
1.5 / 7	≤ 10	-	-50 ± 550	-	Grey	1000	 808 24708
3 / 10	≤ 10	≤ 25	-250 ± 550	500	Yellow	1000	 808 20109 808 23109
3 / 15	≤ 10	≤ 25	-250 ± 550	400	Blue	1000	 808 20159 808 23159
4 / 20	≤ 10	≤ 25	-250 ± 400	300	Green	1000	 808 20209 808 23209
4 / 27	≤ 10	≤ 25	-250 ± 400	300	Red	1000	 808 20279 808 23279

Note

⁽¹⁾ C: 60 % to 80 % of $C_{max.}$; $T_{amb.}$: from +20 °C to +70 °C

SOLDERING CONDITIONS

For general soldering conditions and wave soldering profile, we refer to the application note "Soldering Guidelines for Film Capacitors": www.vishay.com/doc?28171

TEST PROCEDURES AND REQUIREMENTS

IEC 60418-1 CLAUSE	IEC 60068 TEST METHOD	TEST	PROCEDURE	REQUIREMENTS
4.2		Method of mounting	Method A	
14		Capacitance drift	After TC measurement	$\Delta C/C: \leq 3\%$ for $C_{max.} \leq 10$ pF $\Delta C/C: \leq 2\%$ for $C_{max.} > 10$ pF
19		Thrust	Axial thrust of 2 N	$\Delta C/C: \leq 0.4\%$
21		Robustness of terminations:		
21.1	Ua	Tensile	1 N	No damage
21.2	Ub	Bending	1 cycle	No damage

**TEST PROCEDURES AND REQUIREMENTS**

IEC 60418-1 CLAUSE	IEC 60068 TEST METHOD	TEST	PROCEDURE	REQUIREMENTS
22	Na	Rapid change of temperature	1 cycle; 0.5 h at lower and 0.5 h at upper category temperature	$\Delta C/C: \leq 2.5 \%$
23	T	Soldering:		
	Ta	Solderability	Solder bath immersion 3 mm; 235 °C; 2 s	Good wetting; no mechanical damage
	Tb	Resistance to heat	Solder bath: 260 °C; 10 s	No mechanical damage
24	Eb	Impact bump	4000 $\pm$ 10 bumps; 40 g; 6 ms	$\Delta C/C: \leq 1 \%$; no mechanical damage
25	Fc	Vibration	Frequency 10 Hz to 55 Hz; amplitude 0.75 mm; 1.5 h	$\Delta C/C: \leq 1 \%$; no mechanical damage
26		Climatic sequence:		$\Delta C/C: \leq 4 \%$
26.1	B	Dry heat	16 h at upper category temperature	$\tan \delta$ or PP and PTFE foil: $\leq 15 \times 10^{-4}$ $\tan \delta$ for PC foil: $\leq 80 \times 10^{-4}$ $R_{ins.}: \geq 10\,000\,M\Omega$ Rotor contact R: $\leq 10\,m\Omega$
26.2	D	Damp heat accelerated, first cycle	1 cycle; 24 h; +40 °C; 95 % to 100 % RH	Voltage proof: 300 V for 1 min
26.3	Aa	Cold	16 h; -40 °C	Visual examination: no mechanical damage
26.5		Damp heat accelerated, remaining cycles	1 cycle; 24 h; +40 °C; 95 % to 100 % RH	Operating torque: 1 mNm to 20 mNm for $C_{max.} < 20\,pF$; 1 mNm to 30 mNm for $C_{max.} \geq 20\,pF$
27	Ca	Damp heat steady state	21 days; +40 °C; 90 % to 95 % RH	$\Delta C/C: \leq 3 \%$ $\tan \delta$ for PP and PTFE foil: $\leq 15 \times 10^{-4}$; $\tan \delta$ for PC foil: $\leq 80 \times 10^{-4}$ $R_{ins.}: \geq 10\,000\,M\Omega$; Rotor contact R: $\leq 10\,m\Omega$ Voltage proof: 300 V for 1 min Visual examination: no mechanical damage Operating torque: 1 mNm to 20 mNm for $C_{max.} < 20\,pF$; 1 mNm to 30 mNm for $C_{max.} \geq 20\,pF$
29		Mechanical endurance	10 cycles Maximum 10 cycles: rotation in 180° only. (The electrical and mechanical performance is not guaranteed if rotated beyond 10 cycles)	$\Delta C/C: \leq 3 \%$ $\Delta C/C$ after axial thrust: $\leq 0.3 \%$; rotor contact R: $\leq 10\,m\Omega$ Voltage proof: 300 V for 1 min Visual examination: no mechanical damage Operating torque: 0.5 mNm to 22.5 mNm for $C_{max.} < 20\,pF$; 0.5 mNm to 30 mNm for $C_{max.} \geq 20\,pF$



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Material Category Policy

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.

Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.

Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.



**Стандарт
Электрон
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

Наши контакты:

Телефон: +7 812 627 14 35

Электронная почта: sales@st-electron.ru

Адрес: 198099, Санкт-Петербург,
Промышленная ул, дом № 19, литера Н,
помещение 100-Н Офис 331