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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Ø 5 mm Film Dielectric Trimmers



FEATURES

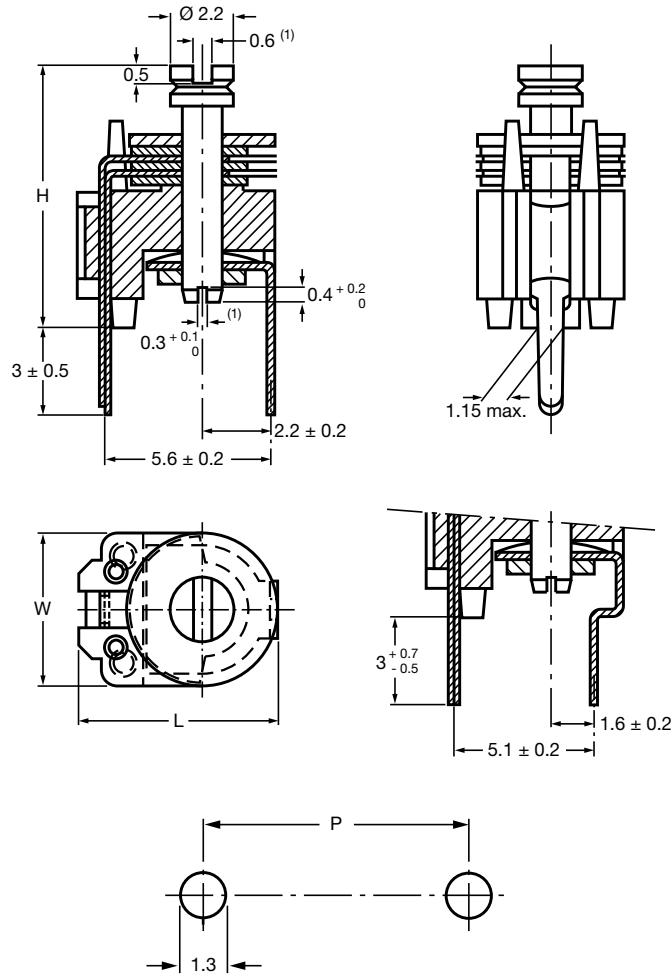
- Housing diameter 5 mm
- Top and bottom or top adjustment
- Round head
- Mounting: radial
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912


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 δ AT C _{max.} × 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	ΔC/C: ≤ 3 % for C _{max.} ≤ 10 pF ΔC/C: ≤ 2 % for C _{max.} > 10 pF
19		Thrust	Axial thrust of 2 N	ΔC/C: ≤ 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 ± 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 $C_{max.} \geq 20\ pF$



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