

Zero Ohm Jumper (0.003 Ω Max.), Metal Foil, Surface-Mount Device



FEATURES

- Ideal for all applications including switching power supplies, voltage regulation modules, DC/DC converters and power management applications
- AEC-Q200 qualified
- High current jumper
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	SIZE	CURRENT RATING A	WEIGHT (typical) g/1000 pieces	RESISTANCE VALUE MAX. Ω
WFZ0402	0402	6.5	0.86	0.003
WFZ0603	0603	25	3.28	0.0005
WFZ0805	0805	31	7.86	0.0005
WFZ1206	1206	38	14.44	0.0005
WFZ2512	2512	63	57.89	0.0005

Note

- AEC-Q200 rev. E testing

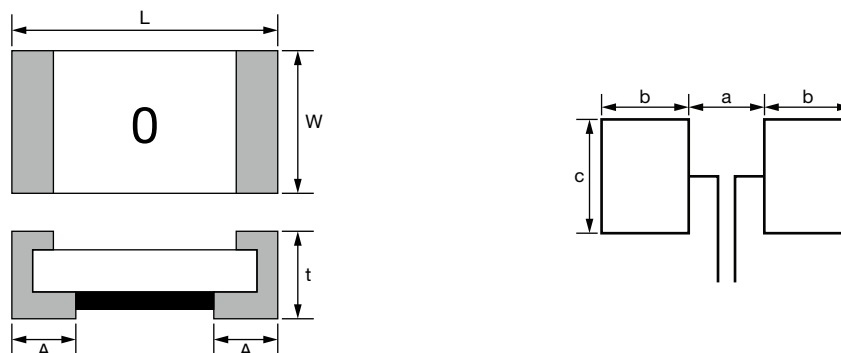
GLOBAL PART NUMBER INFORMATION

Global Part Numbering Example: WFZ08050000ZE66

W	F	Z	0	8	0	5	0	0	0	0	0	Z	E	6	6
GLOBAL MODEL (3 digits)			CASE SIZE (EIA) (4 digits)				RESISTANCE VALUE (5 digits)					TOLERANCE CODE (1 digit)	PACKAGING CODE (3 digits)		
WFZ			0805				00000 = jumper					Z = jumper	E66 = lead (Pb)-free, tape/reel		

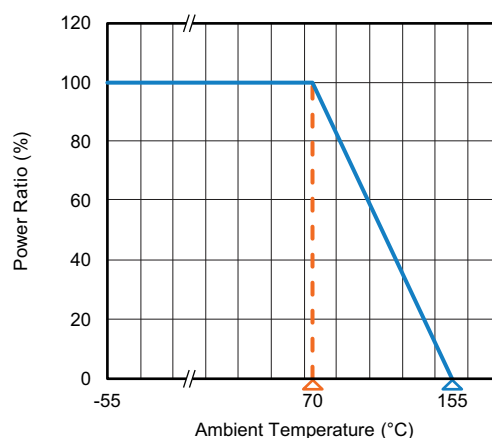
TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Operating temperature range	$^{\circ}\text{C}$	-55 to +155

DIMENSIONS in millimeters

Note

- Surface mount solder profile recommendations: www.vishay.com/doc?31052

TYPE (INCH SIZE)	DIMENSIONS (in millimeters)				SOLDER PAD DIMENSIONS (in millimeters)		
	L	W	t	A	a	b	c
WFZ0402	1.00 ± 0.10	0.50 ± 0.10	0.40 ± 0.10	0.30 ± 0.10	0.40	0.50	0.60
WFZ0603	1.55 ± 0.10	0.80 ± 0.10	0.55 ± 0.10	0.35 ± 0.20	0.90	0.70	1.00
WFZ0805	2.00 ± 0.15	1.25 ± 0.15	0.65 ± 0.10	0.35 ± 0.20	1.20	1.20	1.40
WFZ1206	3.10 ± 0.20	1.55 ± 0.15	0.70 ± 0.10	0.80 ± 0.20	2.00	1.30	1.80
WFZ2512	6.35 ± 0.20	3.10 ± 0.20	0.65 ± 0.10	0.80 ± 0.25	3.80	2.10	3.40

DERATING




PERFORMANCES			
DESCRIPTION	AEC TEST NUMBER	TEST CONDITIONS	LIMIT
High temperature exposure (storage)	3	MIL-STD-202, Method 108, 1000 h at T = 155 °C at 0 % power, measurements at 24 h ± 4 h	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
Temperature cycling	4	JESD22 Method JA-104; 1000 cycles (-55 °C to +155 °C) measurement at 24 h ± 4 h after test conclusion. 15 min. dwell time at each temperature extreme. 1 min. maximum transition time.	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
Moisture resistance	6	MIL-STD-202, Method 106, t = 24 h/cycle. Note: steps 7a and 7b not required, 0 % power, no polo, 65 °C, Measurement at 24 h ± 2 h after test.	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
Biased humidity	7	MIL-STD-202, Method 103, 1000 h 85 °C/85 % RH. Note: specified conditions: 10 % of rating current. Measurement at 24 h ± 4 h after test.	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
Operational life	8	MIL-STD-202 Method 108; 1000 h test; Condition D; 1.5 h "ON", 0.5 h "OFF"; +70 °C at rated current. Measurement 24 h ± 4 h after test conclusion	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
External visual	9	MIL-STD-883, Method 2009; electrical test not required. Inspect device construction, marking, and workmanship	Per MIL-STD-883
Physical dimension	10	JESD22 Method JB-100, Verify physical dimensions to the standard WFZ datasheet.	Per datasheet
Resistance to solvents ⁽¹⁾	12	MIL-STD-202 Method 215; Note: add aqueous wash chemical - OKEM clean or equivalent.	Marking remains legible
Mechanical shock	13	MIL-STD-202, Method 213, Condition C	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
Vibration	14	MIL-STD-202 Method 204; 5 g's for 20 min., 12 cycles each of 3 orientations. Test from 10 Hz to 2000 Hz. Verify transfer load using a laser vibrometer or other adequate measuring device.	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
Resistance to solder heat	15	MIL-STD-202, Method 210, condition K	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
ESD	17	AEC-Q200-002	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
Solderability	18.1	J-STD-002; Method B1; 4 h at +155 °C dry heat; +235 °C lead (Pb)-free; no electrical test; 50 x mag.	> 95 % coverage
Solderability	18.2	J-STD-002; Method B; 4 h at +155 °C dry heat; +215 °C SnPb; no electrical test; 50 x mag.	> 95 % coverage
Solderability	18.3	J-STD-002; Method D; 4 h at +155 °C dry heat; +260 °C lead (Pb)-free; no electrical test; 50 x mag.	> 95 % coverage
Electrical characterization	19	⁽²⁾	
Flammability	20	UL 94	V-0
Board flex	21	AEC-Q200-005; 2 mm min, 60 s hold time	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
Terminal strength (SMD)	22	0402: AEC-Q200-006 force of 0.75 kg for 60 s (terminal strength force was adjusted to 0.75 kg to test to MIL-PRF-55342 Table XVI.) 0603 to 2512: AEC-Q200-006 force of 1.8 kg for 60 s	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ
Short time overload		MIL-PRF-55342 paragraph 4.8.6: 2.5 x rated current for 5 s.	0402: ≤ 3 mΩ 0603 to 2512: ≤ 500 μΩ

Notes

- Full qualification data available upon request at ww2bresistors@vishay.com

⁽¹⁾ Applies to all case sizes except 0402, which does not contain marking

⁽²⁾ Electrical characterization was not performed for this part, as this is a zero-ohm jumper, and not a resistor. The TCR for Cu = 3900 ppm/°C

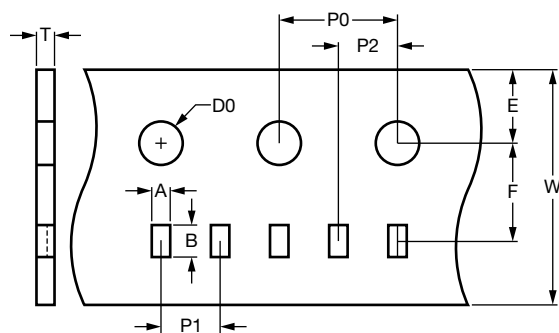
TAPE SPECIFICATION


Fig. 1

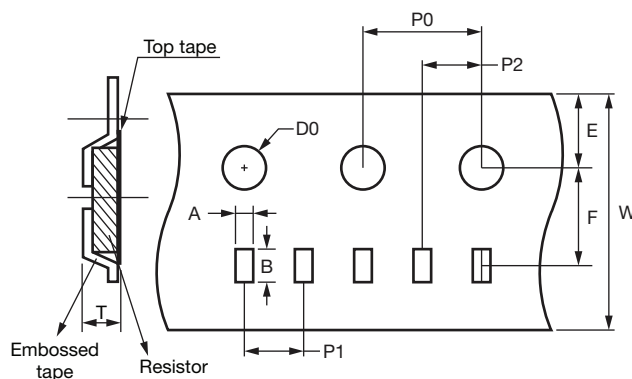


Fig. 2

TYPE	CARRIER DIMENSIONS in millimeters										
	A	B	E	F	W	P0	P1	P2	D0	T	FIG.
WFZ0402	0.7 ± 0.05	1.2 ± 0.05	1.75 ± 0.1	3.5 ± 0.05	8.0 ± 0.2	4.0 ± 0.1	2.0 ± 0.1	2.0 ± 0.05	1.55 ± 0.05	0.45 ± 0.1	1
WFZ0603	1.1 ± 0.1	1.9 ± 0.1	1.75 ± 0.1	3.5 ± 0.05	8.0 ± 0.2	4.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	1.55 ± 0.05	0.60 ± 0.1	1
WFZ0805	1.6 ± 0.1	2.4 ± 0.1	1.75 ± 0.1	3.5 ± 0.05	8.0 ± 0.2	4.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	1.55 ± 0.05	0.97 ± 0.1	1
WFZ1206	2.0 ± 0.1	3.6 ± 0.1	1.75 ± 0.1	3.5 ± 0.05	8.0 ± 0.2	4.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	1.55 ± 0.05	0.97 ± 0.1	1
WFZ2512	3.5 ± 0.1	6.8 ± 0.1	1.75 ± 0.1	5.5 ± 0.05	12.0 ± 0.2	4.0 ± 0.05	4.0 ± 0.1	2.0 ± 0.05	1.5 ± 0.1	1.0 ± 0.2	2

PACKAGING			
MODEL	TAPE WIDTH	DIAMETER	PIECES / REEL
WFZ0402	Embossed paper tape	178 mm / 7"	10 000
WFZ0603 WFZ0508 WFZ1206	Embossed paper tape	178 mm / 7"	5000
WFZ2512	Embossed plastic tape	178 mm / 7"	4000



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