



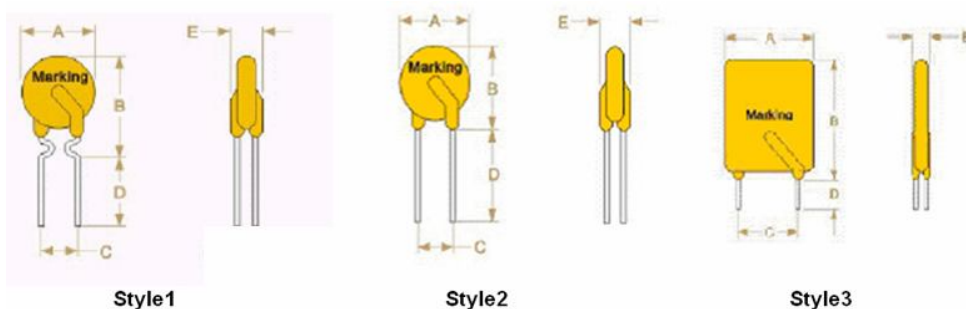
Features

- Radial leded devices, higher rated voltage up to 130V
- Cured, flame retardant epoxy polymer insulating material meets UL94 V-0 requirements
- Lead-free and compliant with the European Union RoHS Directive 2002/95/EC
- Recognition: UL, CSA, TUV is pending



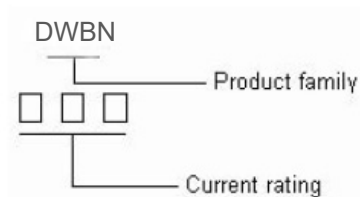
Product Dimensions

Part number	A	B	C	D	E	Lead	
	Max.	Max.	Typ.	Min.	Max.	Style	Size(φ)
DWBN 050F	6.9	9.9	5.1	7.6	4.6	2	0.5
DWBN 080F	7.2	10.2	5.1	7.6	4.6	2	0.5
DWBN 100F	5.5	10.2	5.1	7.6	3.1	1	0.6
DWBN 120F	8.3	10.7	5.1	7.6	3.8	2	0.5
DWBN 150F	6.0	11.4	5.1	7.6	3.1	1	0.6
DWBN 160F	9.9	12.5	5.1	7.6	3.8	2	0.5
DWBN 170F	7.9	13.0	5.1	7.6	3.8	1	0.5
DWBN 200F	6.5	11.6	5.1	7.6	3.1	1	0.6
DWBN 250F	7.8	12.5	5.1	7.6	3.1	1	0.6
DWBN 300F	7.8	12.5	5.1	7.6	3.1	1	0.6
DWBN 330F	11.4	16.5	5.1	7.6	3.8	2	0.6
DWBN 350F	8.7	13.0	5.1	7.6	3.1	1	0.6
DWBN 400F	9.5	14.5	5.1	7.6	3.1	1	0.6
DWBN 500F	10.3	16.5	5.1	7.6	3.1	1	0.6
DWBN 550F	14.0	21.7	5.1	7.6	4.1	3	0.8
DWBN 650F	12.0	17.5	5.1	7.6	3.1	1	0.6
DWBN 700F	10.6	15.5	5.1	7.6	3.8	1	0.6
DWBN 750F	10.9	17.0	5.1	7.6	4.1	3	0.8
DWBN 800F	12.5	17.6	5.1	7.6	3.1	1	0.6
DWBN 900F	11.9	15.9	5.1	7.6	3.8	1	0.6
DWBN 1000F	11.5	20.1	5.1	7.6	4.1	3	0.8
DWBN 1100F	13.9	19.7	5.1	7.6	3.1	1	0.6
DWBN 1250F	13.9	19.7	5.1	7.6	4.1	3	0.8
DWBN 1300F	15.5	20.6	5.1	7.6	4.1	2	0.8
DWBN 1350F	16.1	21.9	5.1	7.6	3.1	1	0.6
DWBN 1600F	17.5	22.5	5.1	7.6	4.1	2	0.8
DWBN 1850F	19.9	24.9	5.1	7.6	4.1	2	0.8
DWBN 2000F	22.5	31.8	10.2	7.6	4.1	3	0.8
DWBN 2500F	22.5	27.5	10.2	7.6	4.1	2	0.8
DWBN 3000F	25.5	30.0	10.2	7.6	4.1	2	0.8
DWBN 3750F	29.5	34.0	10.2	7.6	4.1	2	0.8





### Marking system



\* Lead materials: Tin-plate metal wire.

\* Lead-free devices are available,  
the right logo is lead-free mark.



### Electrical Characteristics

Part number	I <sub>H</sub> (A)	I <sub>T</sub> (A)	Max.Time-to-trip (A) (S)	V <sub>max</sub> (V)	I <sub>max</sub> (A)	R <sub>min</sub> (Ω)	R <sub>max</sub> (Ω)	R <sub>1max</sub> (Ω)
DWBN 050F	0.05	0.12	0.25 10.0	135	1.0	18.50	31.00	65.00
DWBN 080F	0.08	0.19	0.40 10.0	135	1.2	7.40	12.00	26.00
DWBN 100F	0.10	0.20	0.50 3.6	135	2.0	5.60	10.00	20.10
DWBN 120F	0.12	0.30	0.60 15.0	135	1.2	3.00	6.50	12.00
DWBN 150F	0.15	0.30	0.75 3.2	135	2.0	2.30	6.50	10.70
DWBN 160F	0.16	0.37	0.80 15.0	135	2.0	2.50	4.10	7.80
DWBN 170F	0.17	0.34	0.85 10.0	135	2.0	2.00	7.00	10.80
DWBN 200F	0.20	0.40	1.00 3.0	135	2.0	1.70	3.40	6.10
DWBN 250F	0.25	0.50	1.25 8.0	135	3.0	1.25	1.65	3.45
DWBN 300F	0.30	0.60	1.50 5.8	135	3.0	0.90	1.55	2.95
DWBN 330F	0.33	0.74	1.65 21.0	135	4.5	0.77	1.24	2.60
DWBN 350F	0.35	0.70	1.75 7.0	135	3.0	0.85	1.20	2.45
DWBN 400F	0.40	0.80	2.00 5.0	135	3.0	0.72	1.25	2.36
DWBN 500F	0.50	1.00	2.50 5.3	135	3.0	0.55	0.85	1.68
DWBN 550F	0.55	1.25	2.75 26.0	135	7.0	0.45	0.73	1.45
DWBN 650F	0.65	1.30	3.25 6.5	135	5.0	0.40	0.65	1.26
DWBN 700F	0.75	1.50	3.75 6.3	135	5.0	0.25	0.60	1.05
DWBN 750F	0.75	1.50	3.75 14.0	135	7.5	0.25	0.40	0.69
DWBN 800F	0.80	1.60	4.00 7.0	135	5.0	0.30	0.59	0.93
DWBN 900F	0.90	1.80	4.50 7.2	135	5.0	0.20	0.47	0.70
DWBN 1000F	1.00	2.00	5.00 13.6	135	10.0	0.18	0.27	0.47
DWBN 1100F	1.10	2.20	5.50 7.3	135	8.0	0.15	0.50	0.68
DWBN 1250F	1.25	2.50	6.25 18.0	135	12.5	0.12	0.18	0.32
DWBN 1300F	1.35	2.70	6.75 9.6	135	10.0	0.12	0.30	0.44
DWBN 1350F	1.35	2.70	6.75 7.5	135	13.5	0.11	0.38	0.52
DWBN 1600F	1.60	3.20	8.00 11.4	135	12.0	0.09	0.22	0.33
DWBN 1850F	1.85	3.70	9.25 12.6	135	12.0	0.08	0.19	0.29
DWBN 2000F	2.00	4.20	10.00 36.0	135	20.0	0.08	0.12	0.21
DWBN 2500F	2.50	5.00	12.50 15.6	135	15.0	0.05	0.13	0.19
DWBN 3000F	3.00	6.00	15.00 19.8	135	17.0	0.04	0.10	0.15
DWBN 3750F	3.75	7.50	18.75 24.0	135	20.0	0.03	0.08	0.12

I<sub>H</sub>=Hold current: maximum current at which the device will not trip at 25°C still air.

I<sub>T</sub>=Trip current: minimum current at which the device will always trip at 25°C still air.

V<sub>max interrupt</sub>=Maximum interrupt voltage device can withstand without damage at rated current.

I<sub>max</sub>=Maximum fault current device can withstand without damage at rated voltage.

Max.Time-to-trip =Maximum time to trip(s) at assigned current.

P<sub>d typ</sub>=Typical power dissipation: typical amount of power dissipated by the device when in state air environment.

R<sub>min</sub>=Minimum device resistance at 25°C prior to tripping.

R<sub>max</sub>=Maximum device resistance at 25°C prior to tripping.

R<sub>1max</sub>= Maximum resistance of device when measured one hour post trip at 25°C.



### Thermal Derating Chart-Ih (A)

Part number	Maximum ambient operating temperatures(°C)								
	-40	-20	0	25	40	50	60	70	85
DWBN 050F	0.08	0.07	0.06	0.05	0.04	0.03	0.03	0.02	0.02
DWBN 080F	0.13	0.12	0.10	0.08	0.06	0.05	0.05	0.04	0.03
DWBN 100F	0.23	0.19	0.15	0.10	0.08	0.06	0.05	0.04	0.02
DWBN 120F	0.25	0.18	0.15	0.12	0.10	0.09	0.07	0.06	0.04
DWBN 150F	0.28	0.24	0.20	0.15	0.13	0.11	0.09	0.07	0.05
DWBN 160F	0.30	0.25	0.21	0.16	0.14	0.12	0.10	0.08	0.06
DWBN 170F	0.31	0.26	0.22	0.17	0.15	0.13	0.11	0.09	0.07
DWBN 200F	0.33	0.29	0.25	0.20	0.18	0.16	0.14	0.12	0.10
DWBN 250F	0.38	0.34	0.30	0.25	0.22	0.20	0.18	0.16	0.14
DWBN 300F	0.43	0.39	0.35	0.30	0.27	0.25	0.23	0.21	0.18
DWBN 330F	0.58	0.50	0.42	0.33	0.27	0.23	0.20	0.17	0.11
DWBN 350F	0.48	0.44	0.40	0.35	0.32	0.30	0.28	0.26	0.23
DWBN 400F	0.53	0.49	0.45	0.40	0.37	0.35	0.33	0.31	0.28
DWBN 500F	0.63	0.59	0.55	0.50	0.47	0.45	0.43	0.41	0.38
DWBN 550F	0.91	0.80	0.69	0.55	0.45	0.39	0.34	0.28	0.21
DWBN 650F	0.78	0.74	0.70	0.65	0.62	0.60	0.58	0.56	0.53
DWBN 700F	1.42	1.21	0.96	0.75	0.63	0.56	0.50	0.43	0.34
DWBN 750F	1.45	1.24	0.99	0.75	0.65	0.58	0.52	0.45	0.36
DWBN 800F	0.93	0.89	0.85	0.80	0.77	0.75	0.73	0.71	0.68
DWBN 900F	1.48	1.23	1.12	0.90	0.72	0.64	0.56	0.50	0.37
DWBN 1000F	1.60	1.42	1.23	1.00	0.78	0.69	0.61	0.54	0.42
DWBN 1100F	1.23	1.19	1.15	1.10	1.07	1.05	1.03	1.01	0.98
DWBN 1250F	2.03	1.81	1.58	1.25	1.08	0.98	0.86	0.75	0.63
DWBN 1300F	2.06	1.84	1.62	1.30	1.11	1.00	0.89	0.77	0.64
DWBN 1350F	1.48	1.44	1.40	1.35	1.32	1.30	1.28	1.26	1.23
DWBN 1600F	2.34	2.12	1.91	1.60	1.40	1.29	1.19	1.08	0.94
DWBN 1850F	2.60	2.38	2.16	1.85	1.56	1.46	1.34	1.23	1.09
DWBN 2000F	2.76	2.54	2.32	2.00	1.71	1.60	1.49	1.39	1.25
DWBN 2500F	3.27	3.05	2.83	2.50	2.22	2.11	1.99	1.87	1.73
DWBN 3000F	3.75	3.53	3.32	3.00	2.69	2.58	2.49	2.38	2.24
DWBN 3750F	4.51	4.29	4.07	3.75	3.45	3.34	3.24	3.12	2.98

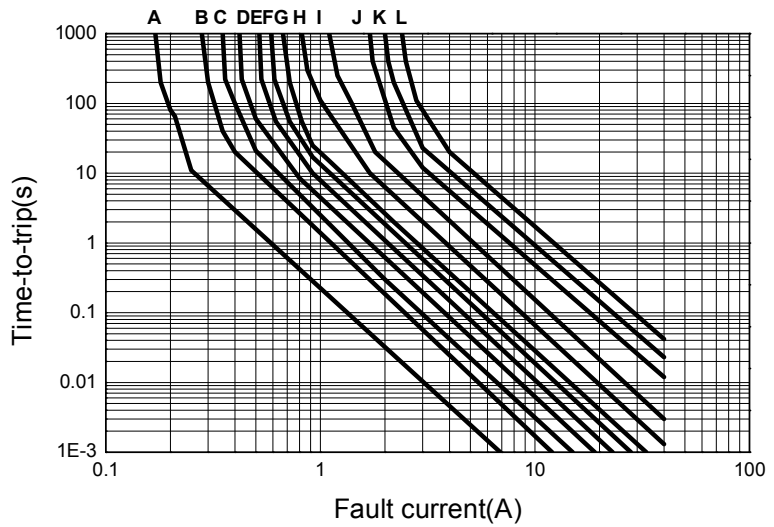
### Test Procedures And Requirements

Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25°C	$R_{min} \leq R \leq R_{max}$
Time to Trip	Specified current, $V_{max}$ , 25°C	$T \leq$ maximum Time to Trip
Hold Current	30min, at $I_H$	No trip
Trip Cycle Life	$V_{max}$ , $I_{max}$ , 100cycles	No arcing or burning
Trip Endurance	$V_{max}$ , 24hours	No arcing or burning

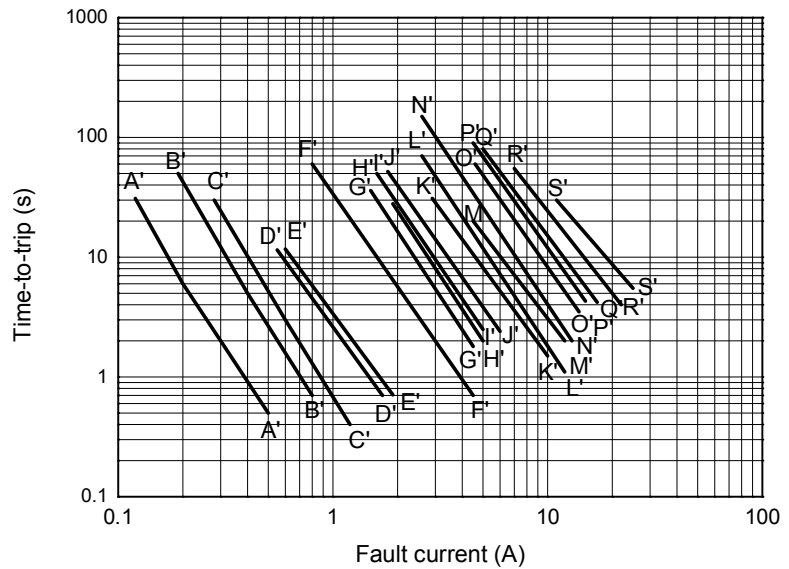


Typical Time-to-trip Charts at 25°C

- A= DWBN100
- B=DWBN150
- C= DWBN200
- D=DWBN250
- E= DWBN300
- F= DWBN350
- G= DWBN400
- H= DWBN500
- I = DWBN650
- J = DWBN800
- K= DWBN1100
- L= DWBN1350



- A'=DWBN050
- B'=DWBN080
- C'=DWBN120
- D'=DWBN160
- E'=DWBN170
- F'=DWBN330
- G'=DWBN550
- H'=DWBN700
- I'=DWBN750
- J'=DWBN900
- K'=DWBN1000
- L'=DWBN1250
- M'=DWBN1300
- N'=DWBN1600
- O'=DWBN1850
- P'=DWBN2000
- Q'=DWBN2500
- R'=DWBN3000
- S'=DWBN3750



Package Information

Bulk:

DWBN100F~DWBN1350F.....1000pcs per bag

DWBN1600~DWBN3750F.....500pcs per bag

Tape & Reel:

DWBN100F~DWBN1350F.....3000pcs per reel

Notices:

The devices are intended for protection against occasional overcurrent or overtemperature fault conditions and should not be used when repeated fault conditions are anticipated.

Operation beyond maximum ratings or improper use may result in device damage and possible electrical arcing and flame.