UBF dSMD Series (0603)

Electrical Characteristics

Part No	I_{hold} (A)	I_{trip} (A)	V_{max} (V)	I_{max} (A)	$P_{d\ type}$ (W)	Max. (A)	Time-to-trip (S)	R_{min} (Ω)	R_{1max} (Ω)
UBF dSMD 005	0.05	0.15	40	15	0.5	0.50	0.10	3.80	3.00
UBF dSMD 010	0.10	0.25	40	15	0.5	0.70	0.10	0.90	8.00
UBF dSMD 012	0.12	0.30	40	9	0.5	0.80	0.10	1.10	5.80
UBF dSMD 016	0.16	0.40	40	9	0.5	1.00	0.10	1.00	4.20
UBF dSMD 020	0.20	0.45	40	9	0.5	2.00	0.10	0.55	3.50

I_{hold}: Hold current is the maximum current that **BF Fuse** can pass through without interruption at 20°C unless otherwise specified.

I_{trip}: Trip current is the minimum current that will switch the device from low resistance state to high resistance state at 20°C unless specified.

V_{max}: The maximum voltage device can withstand without damage at rated current.

I_{max}: The maximum current device can withstand without damage at rated voltage.

P_d: The power dissipated from device when in the tripped state at 20°C unless otherwise specified.

R_{min}: The minimum resistance of device as received from the factory at 20°C unless otherwise specified.

R_{max}: The maximum resistance of device as received from the factory at 20°C unless otherwise specified.

R_{1max}: The maximum resistance of device when measured one hour post reflow at 20°C unless otherwise specified.

Max. Time-to-trip: The maximum time for device to trip at specified current ratings at 20°C unless otherwise specified.

Dimensions

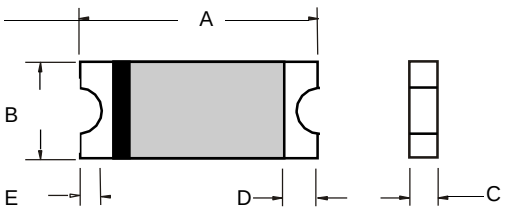
Part No	A		B		C		D		E	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
UBF dSMD	1.40	1.80	0.45	1.00	0.35	0.75	0.10	0.50	0.08	0.40

NOTE: All drawings are not in scale and layout may vary. All parts dimension is in millimeter unless otherwise pecified. Terminal material is Tin (Sn) plated Copper (Cu).

Packaging: 4000 pcs per reel

Agency Approval:

UL File Number	E 119550
c-UL File Number	E 119550
TUV File Number	Pending

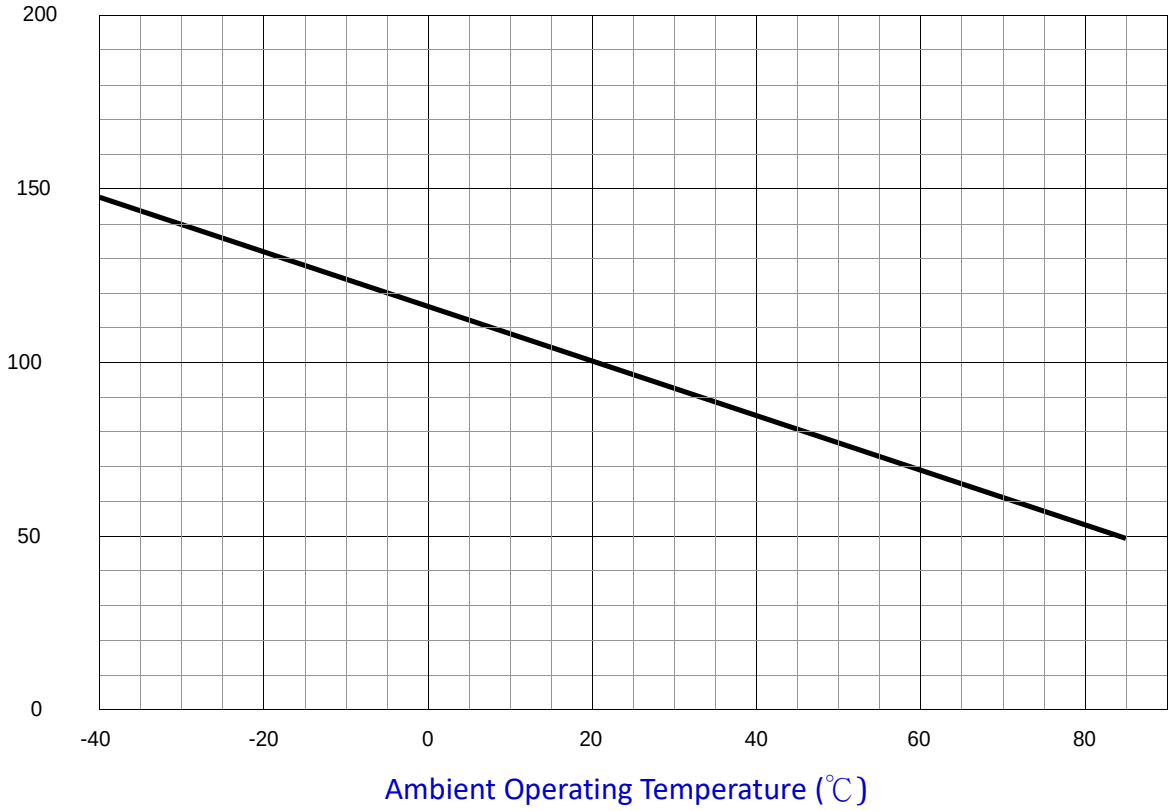


Top and Bottom Side View

UBF dSMD Series (0603)

Typical Thermal Derating Chart – I_{hold} (A)

Part No	-40	-20	0	20	40	60	85
UBF dSMD005	0.70	0.07	0.06	0.05	0.04	0.03	0.0.2
UBF dSMD010	0.15	0.14	0.12	0.10	0.08	0.06	0.04
UBF dSMD012	0.18	0.16	0.14	0.12	0.10	0.07	0.04
UBF dSMD016	0.24	0.22	0.19	0.16	0.13	0.10	0.06
UBF dSMD020	0.29	0.27	0.24	0.20	0.16	0.12	0.07

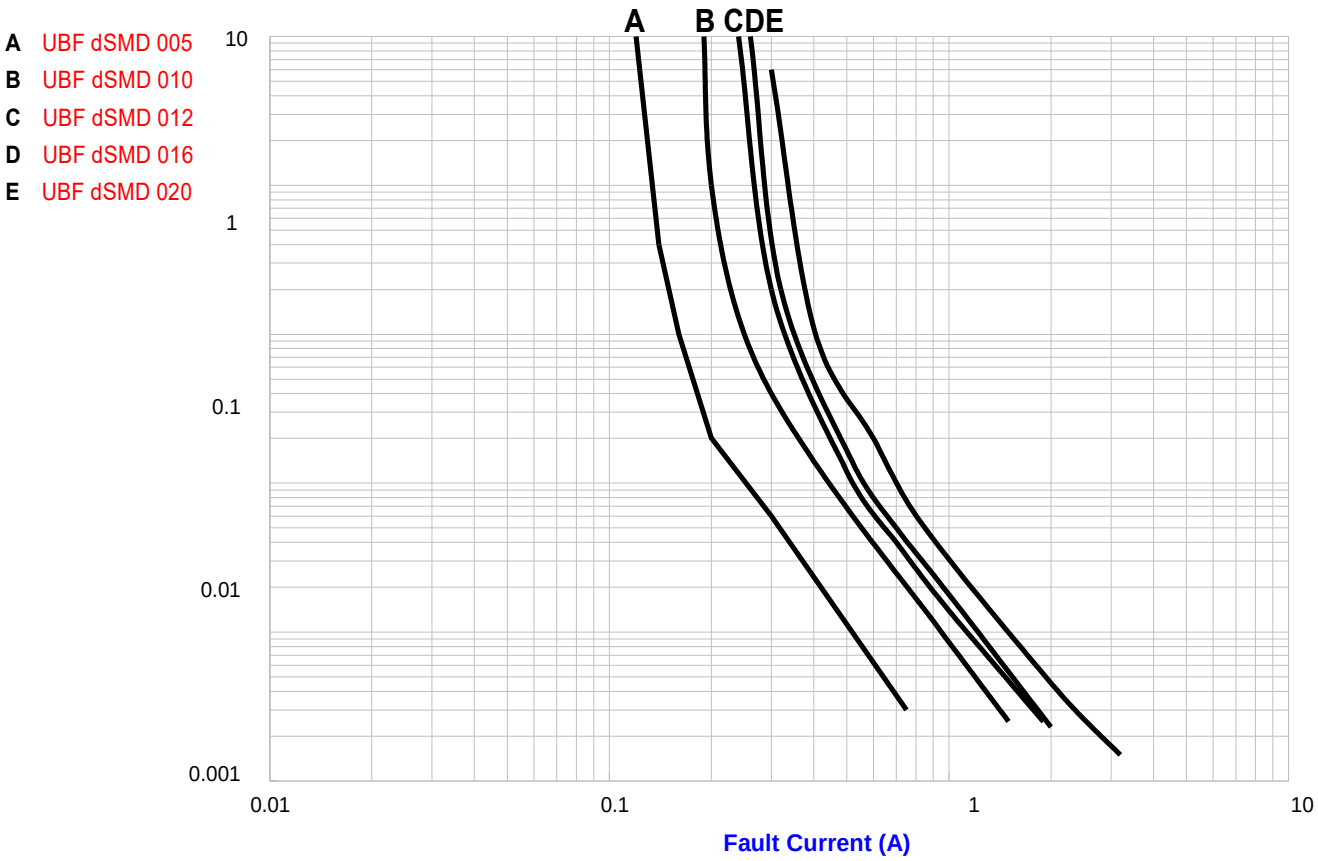


Environmental Characteristics

Test	Test Conditions	Resistance Change
Passive Aging	+85°C, 1000 hours	±10% typical resistance change
Humidity Aging	+85°C, 85% R.H., 7 days	±10% typical resistance change
Thermal Shock	+85°C to -40°C, 10 times	±10% typical resistance change
	MIL-STD-202, Method 107G	
Vibration	MIL-STD-883C, Condition A	No change
Solvent resistance	MIL-STD-202, Method 215	No change

UBF dSMD Series (0603)

Typical Time To Trip Curve at 20°C



Ordering Information

UBF dSMD 005

UB Fuse Product Designator

Product Family
dSMD – 0603mils

Hold Current, I_{hold}
035-075 (0.35 – 0.75A)

Part Marking

Part Identification, Ihold

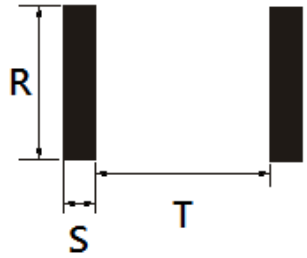
FZ – UBFd SMD005
FA – UBFd SMD010
FB – UBFd SMD012
FC – UBFd SMD016
FD – UBFd SMD020

Manufacturer Logo

Sn plated Cu Termination

UBF dSMD Series (0603)

Recommended Reflow Profile & Pad Size

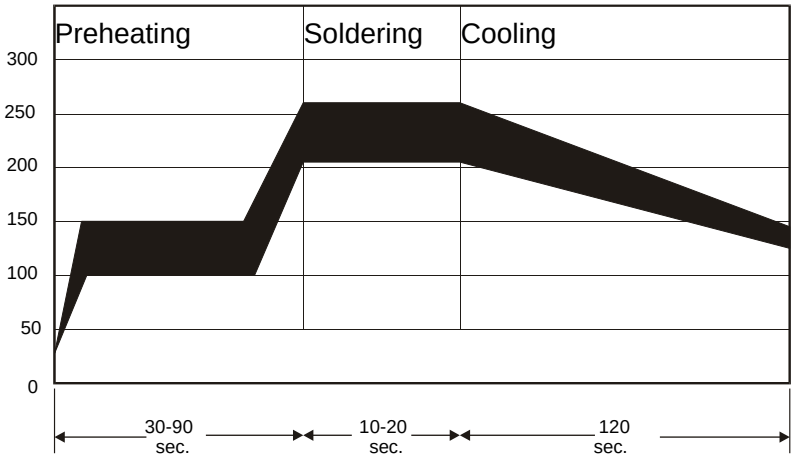


Recommended Pad Layout

Part No.	R	S	T
UBF dSMD005	0.80	0.60	0.80
UBF dSMD010	0.80	0.60	0.80
UBF dSMD012	0.80	0.60	0.80
UBF dSMD016	0.80	0.60	0.80
UBF dSMD020	0.80	0.60	0.80

Reflow

- The recommended reflow profile is shown as the figure at right hand side.
- A maximum solder paste of thickness 0.25mm is recommended.
- Hot air, infra-red, vapor phase reflowing are recommended.



WARNING:

- Devices may not meet specifications if reflow temperatures exceed the recommended profile.
- Operation beyond maximum ratings or improper use may result in device damage and possible electrical arcing, flaming or explosion.
- The devices may not meet specified ratings if storage conditions exceeded 40°C and 70% relative humidity.
- The devices are intended to protect against occasional over-current or over-temperature fault conditions and should not be used when there are repeated fault conditions or prolonged trip events.
- The devices should not be placed under pressure or installed in spaces that would prevent thermal expansion, due to any prohibition of thermal expansion of the devices might result improper protection of fault conditions.
- UNIX TECH reserves the right to change any information or specification within this data book without notice.

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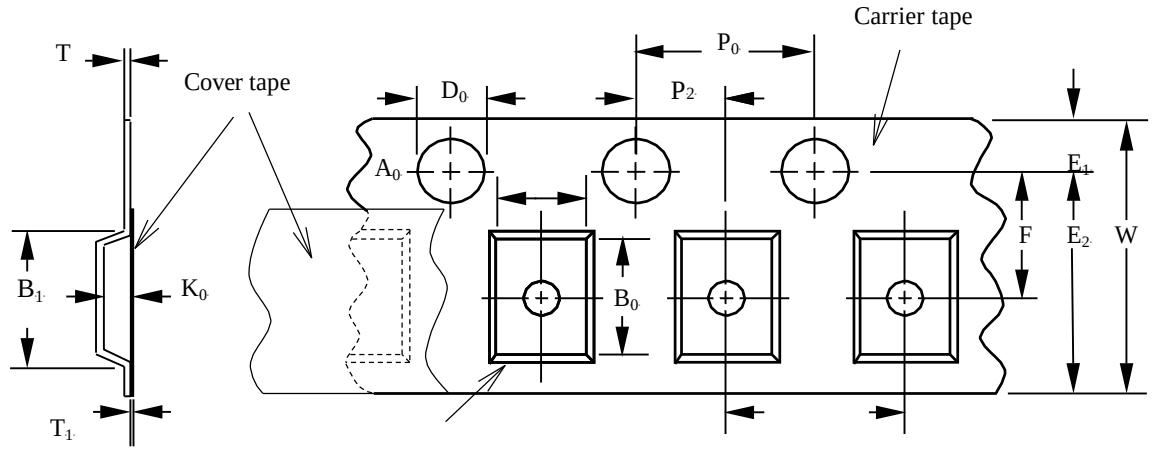
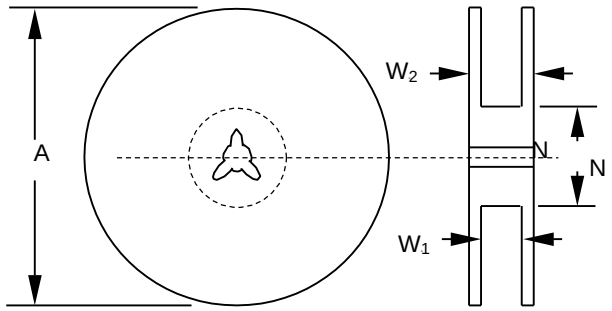
Tape & Reel Packaging Specification per EIA481-1



Parameter as EIA481-1	Dimensions (mm)
W	12.00 ± 0.30
P_0	4.00 ± 0.10
P_1	8.00 ± 0.10
P_2	2.00 ± 0.05
A_0	3.50 ± 0.23
B_0	5.10 ± 0.15
B_1 max.	8.2
D_0	1.50 +0.10/-0.00
F	5.50 ± 0.05
E_1	1.75 ± 0.10
E_2 min.	10.25
T max.	0.6
T_1 max.	0.1
K_0	0.90 ± 0.15



Parameter as EIA481-1	Dimensions (mm)
A max.	185
N min.	50
W1	8.4 +1.5/-0.0
W2 max.	14.4