

Features

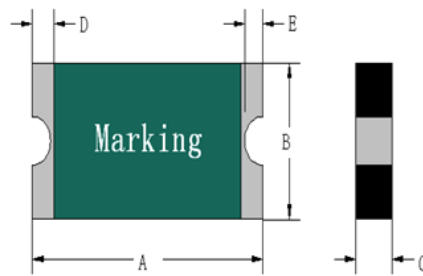
- ✧ Small size of 0805
- ✧ Fast tripping resettable circuit protection
- ✧ Surface mount packaging for automated assembly
- ✧ Agency recognition: UL、CSA、TUV



Product Dimensions

Size 2012mm/0805mils

Part number	A	B	C	D	E
	Max.	Max.	Max.	Min.	Min.
DW-ISM005	2.50	1.60	1.00	0.20	0.10
DW-ISM010	2.50	1.60	1.00	0.20	0.10
DW-ISM020	2.50	1.60	1.00	0.20	0.10
DW-ISM035	2.50	1.60	0.75	0.20	0.10
DW-ISM050	2.50	1.60	1.25	0.20	0.10
DW-ISM075	2.50	1.60	1.30	0.20	0.10
DW-ISM110	2.50	1.60	1.30	0.20	0.10
DW-ISML075	2.50	1.60	0.80	0.20	0.10
DW-ISML075/12	2.50	1.60	0.80	0.20	0.10
DW-ISML110	2.50	1.60	0.80	0.20	0.10
DW-ISML110/12	2.50	1.60	0.80	0.20	0.10
DW-ISML125	2.50	1.60	0.80	0.20	0.10
DW-ISML125/12	2.50	1.60	0.80	0.20	0.10
DW-ISML150	2.50	1.60	0.80	0.20	0.10
DW-ISML150/12	2.50	1.60	0.80	0.20	0.10
DW-ISML160	2.50	1.60	0.80	0.20	0.10
DW-ISML175	2.50	1.60	0.80	0.20	0.10
DW-ISML175/12	2.50	1.60	0.80	0.20	0.10
DW-ISML200	2.50	1.60	0.80	0.20	0.10
DW-ISML200/12	2.50	1.60	0.80	0.20	0.10
DW-ISML260	2.50	1.60	0.80	0.20	0.10
DW-ISML260/12	2.50	1.60	0.80	0.20	0.10
DW-ISML300	2.50	1.60	1.00	0.20	0.10
DW-ISML350	2.50	1.60	1.00	0.20	0.10
DW-ISML380	2.50	1.60	1.00	0.20	0.10
DW-ISML400	2.50	1.60	1.40	0.20	0.10
DW-ISML450	2.50	1.60	1.40	0.20	0.10

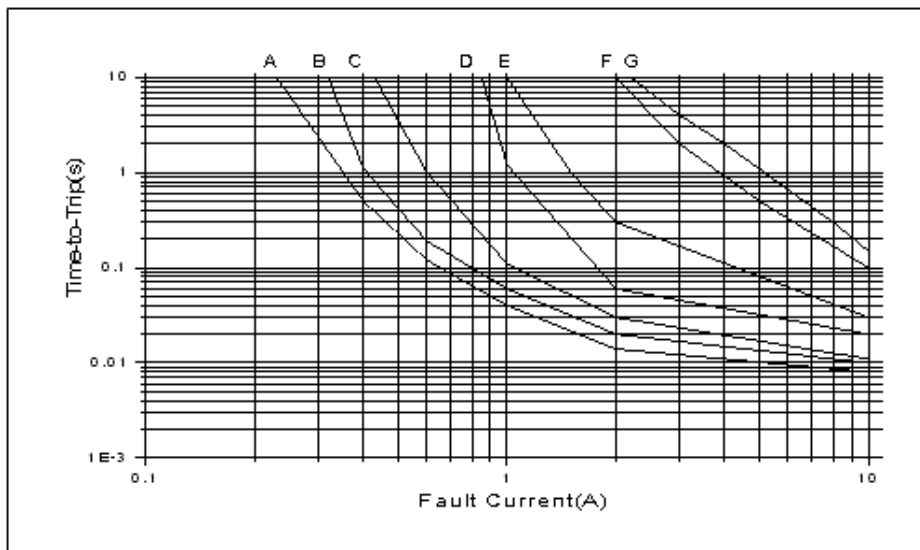


Thermal Derating Chart-IH(A)

Size 2012mm/0805mils

Part number	Maximum ambient operating temperatures(°C)									
	-40	-20	0	20	25	40	50	60	70	85
DW-ISM005	0.08	0.07	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.02
DW-ISM010	0.14	0.13	0.12	0.10	0.10	0.09	0.08	0.07	0.06	0.04
DW-ISM020	0.29	0.25	0.23	0.20	0.20	0.17	0.15	0.14	0.12	0.08
DW-ISM035	0.51	0.45	0.40	0.36	0.35	0.30	0.26	0.25	0.21	0.16
DW-ISM050	0.76	0.66	0.58	0.51	0.50	0.43	0.38	0.34	0.30	0.24
DW-ISM075	1.09	0.99	0.86	0.77	0.75	0.64	0.56	0.51	0.45	0.34
DW-ISM110	1.59	1.45	1.25	1.12	1.10	0.94	0.83	0.75	0.65	0.51
DW-ISML075	1.11	0.98	0.90	0.79	0.75	0.62	0.56	0.50	0.45	0.33
DW-ISML075/12	1.11	0.98	0.90	0.79	0.75	0.62	0.56	0.50	0.45	0.33
DW-ISML110	1.60	1.45	1.25	1.13	1.10	0.95	0.80	0.75	0.66	0.50
DW-ISML110/12	1.60	1.45	1.25	1.13	1.10	0.95	0.80	0.75	0.66	0.50
DW-ISML125	1.68	1.46	1.36	1.28	1.25	1.04	0.93	0.86	0.71	0.50
DW-ISML125/12	1.68	1.46	1.36	1.28	1.25	1.04	0.93	0.86	0.71	0.50
DW-ISML150	2.01	1.76	1.63	1.53	1.50	1.24	1.11	1.03	0.86	0.60
DW-ISML150/12	2.01	1.76	1.63	1.53	1.50	1.24	1.11	1.03	0.86	0.60
DW-ISML160	2.23	1.95	1.84	1.63	1.60	1.38	1.25	1.10	0.92	0.66
DW-ISML175	2.35	2.05	1.90	1.78	1.75	1.45	1.30	1.20	1.00	0.70
DW-ISML175/12	2.35	2.05	1.90	1.78	1.75	1.45	1.30	1.20	1.00	0.70
DW-ISML200	2.69	2.34	2.17	2.03	2.00	1.66	1.49	1.37	1.14	0.80
DW-ISML200/12	2.69	2.34	2.17	2.03	2.00	1.66	1.49	1.37	1.14	0.80
DW-ISML260	3.45	3.01	2.76	2.62	2.60	2.12	1.90	1.75	1.45	1.00
DW-ISML260/12	3.45	3.01	2.76	2.62	2.60	2.12	1.90	1.75	1.45	1.00
DW-ISML300	4.01	3.50	3.25	3.02	3.00	2.50	2.20	2.05	1.70	1.20
DW-ISML350	4.71	4.10	3.75	3.56	3.50	2.88	2.63	2.40	2.00	1.42
DW-ISML380	6.12	4.76	4.16	4.00	3.80	3.00	2.80	2.50	2.10	1.50
DW-ISML400	6.40	5.00	4.35	4.18	4.00	3.13	2.93	2.60	2.20	1.57
DW-ISML450	7.20	5.60	4.88	4.70	4.50	3.56	3.30	2.90	2.45	1.76

Typical Time-to-Trip Charts at 25°C



DW-ISM Series

A = DW-ISM005

B = DW-ISM010

C = DW-ISM020

D = DW-ISM035

E = DW-ISM050

F = DW-ISM075

G = DW-ISM110

Electrical Characteristics at 25°C

Size 2012mm/0805mil

Part number	I_H (A)	I_T (A)	V_{max} (V)	I_{max} (A)	Max.Time-to-trip (A)	(S)	Pd_{Max} (W)	R_{min} (Ω)	R_{1max} (Ω)
DW-ISM005	0.05	0.15	15	10	0.5	2.00	0.5	3.000	50.00
DW-ISM010	0.10	0.30	15	10	0.5	1.50	0.5	1.000	6.000
DW-ISM020	0.20	0.50	9	40	8.0	0.02	0.5	0.650	3.500
DW-ISM035	0.35	0.75	6	40	8.0	0.10	0.5	0.250	1.200
DW-ISM050	0.50	1.00	6	40	8.0	0.10	0.5	0.150	0.850
DW-ISM075	0.75	1.50	6	40	8.0	0.20	0.5	0.100	0.400
DW-ISM110	1.10	2.20	6	40	8.0	0.30	0.5	0.050	0.210
DW-ISML075	0.75	1.50	8	50	8.00	0.20	1	0.060	0.300
DW-ISML075/12	0.75	1.50	12	50	8.00	0.20	1	0.060	0.300
DW-ISML110	1.10	2.20	8	50	8.00	0.30	2	0.050	0.210
DW-ISML110/12	1.10	2.20	12	50	8.00	0.30	2	0.050	0.210
DW-ISML125	1.25	2.50	8	50	8.00	5.00	1.2	0.030	0.160
DW-ISML125/12	1.25	2.50	12	50	8.00	5.00	1.2	0.030	0.160
DW-ISML150	1.50	3.00	8	50	8.00	5.00	1.2	0.020	0.080
DW-ISML150/12	1.50	3.00	12	50	8.00	5.00	1.2	0.020	0.080
DW-ISML160	1.60	3.20	8	50	8.00	5.00	1.2	0.015	0.070
DW-ISML175	1.75	3.50	8	50	8.00	5.00	1.2	0.015	0.065
DW-ISML175/12	1.75	3.50	12	50	8.00	5.00	1.2	0.015	0.065
DW-ISML200	2.00	4.00	8	50	8.00	5.00	1.2	0.008	0.050
DW-ISML200/12	2.00	4.00	12	50	8.00	5.00	1.2	0.008	0.050

Part number	I_H (A)	I_T (A)	V_{max} (V)	I_{max} (A)	Max.Time-to-trip (A)	PdMax (S)	R _{min} (W)	R _{1max} (Ω)	R _{1max} (Ω)
DW-ISML260	2.60	5.20	8	50	8.00	5.00	1.2	0.007	0.030
DW-ISML260/12	2.60	5.20	12	50	8.00	5.00	1.2	0.007	0.030
DW-ISML300	3.00	6.00	8	50	8.00	5.00	1.2	0.005	0.020
DW-ISML350	3.50	7.00	8	50	8.00	5.00	1.2	0.004	0.018
DW-ISML380	3.80	7.60	8	50	8.00	5.00	1.2	0.002	0.016
DW-ISML400	4.00	8.00	6	50	8.00	5.00	1.2	0.002	0.014
DW-ISML450	4.50	9.00	6	50	8.00	5.00	1.2	0.002	0.012

I_H =Hold current: maximum current at which the device will not trip at 25°C still air.

I_T =Trip current: minimum current at which the device will always trip at 25°C still air.

V_{max} =Maximum voltage device can withstand without damage at rated current.

I_{max} =Maximum fault current device can withstand without damage at rated voltage.

T_{trip} =Maximum time to trip at assigned current.

Pd_{typ} =Typical power dissipation: typical amount of power dissipated by the device when in state air environment.

R_{min} =Minimum device resistance at 25°C prior to tripping.

R_{1max} =Maximum device resistance measured in the nontripped state 1 hour post reflow.

Marking System



Part identification

Part Numbering System

DW-ISM L 200

Hold current

Low resistance

Product series

Test Procedures And Requirements

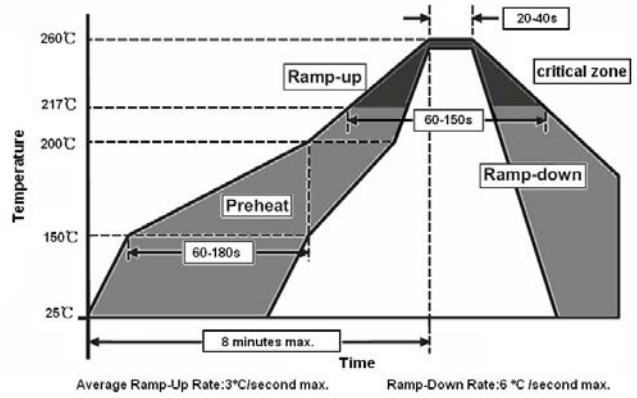
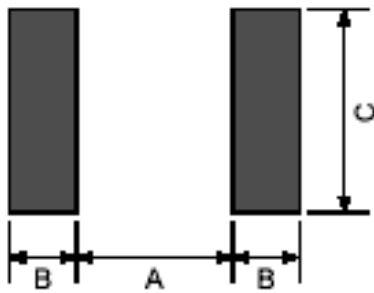
Test	Test Conditions	Accept/Reject Criteria
Resistance	In still air @ 25°C	$R_{min} \leq R \leq R_{max}$
Time to Trip	Specified current, V_{max} , 25°C	$T \leq$ maximum Time to Trip
Hold Current	30min, at I_H	No trip
Trip Cycle Life	V_{max} , I_{max} , 100cycles	No arcing or burning
Trip Endurance	V_{max}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

Packaging and Marking Information

Size 2012mm/0805mils

Part number	Tape & Reel Quantity	Tape spc code	Part Marking	Recommended Pad Layout Figures[mm(In.)]						Agency Recognition
				Dimension A(Nom.)		Dimension B(Nom.)		Dimension C(Nom.)		
DW-ISM005	4000	0805B	1	1.20	(0.051)	1.00	(0.041)	1.50	(0.061)	UL,CSA,TUV
DW-ISM010	4000	0805B	0	1.20	(0.051)	1.00	(0.041)	1.50	(0.061)	UL,CSA,TUV
DW-ISM020	4000	0805B	2	1.20	(0.051)	1.00	(0.041)	1.50	(0.061)	UL,CSA,TUV
DW-ISM035	4000	0805B	3	1.20	(0.051)	1.00	(0.041)	1.50	(0.061)	UL,CSA,TUV
DW-ISM050	4000	0805B	4	1.20	(0.051)	1.00	(0.041)	1.50	(0.061)	UL,CSA,TUV
DW-ISM075	4000	0805B	5	1.20	(0.051)	1.00	(0.041)	1.50	(0.061)	UL,CSA,TUV
DW-ISM110	4000	0805B	6	1.20	(0.051)	1.00	(0.041)	1.50	(0.061)	UL,CSA,TUV
DW-ISML075	4000	0805B	5	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML075/12	4000	0805B	5	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA
DW-ISML110	4000	0805B	6	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML110/12	4000	0805B	6	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA
DW-ISML125	4000	0805B	7	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML125/12	4000	0805B	7	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA
DW-ISML150	4000	0805B	8	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML150/12	4000	0805B	8	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA
DW-ISML160	4000	0805B	16	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA
DW-ISML175	4000	0805B	9	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML175/12	4000	0805B	9	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA
DW-ISML200	4000	0805B	10	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML200/12	4000	0805B	10	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA
DW-ISML260	4000	0805B	a	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML260/12	4000	0805B	a	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA
DW-ISML300	4000	0805B	b	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML350	4000	0805B	e	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML380	4000	0805B	f	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML400	4000	0805B	g	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV
DW-ISML450	4000	0805B	h	1.20	(0.047)	1.00	(0.039)	1.50	(0.059)	UL,CSA,TUV

Solder Pad Layouts



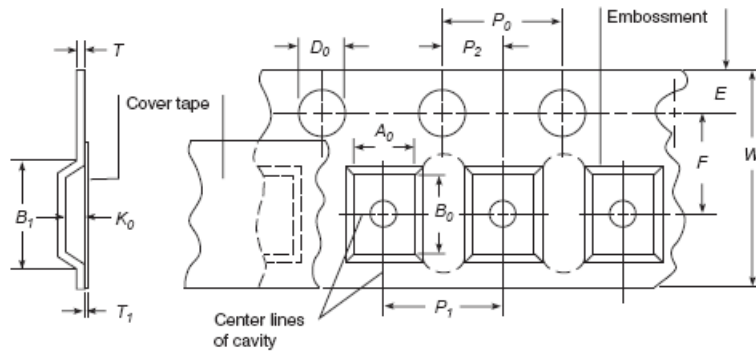
- * Recommended reflow methods: IR, Vapor phase oven, hot air oven, wave solder.
- * Devices can be cleaned using standard industry methods and solvents

Notes:

If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

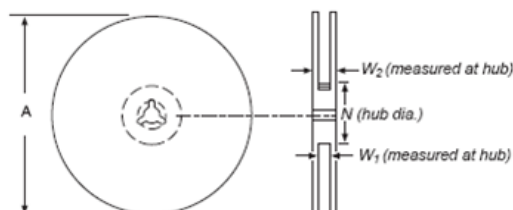
Tape Specification And Reel Dimensions

Tape spc code	W	P0	P1	P2	A	B	D	F	E	T	K
0805(B)	8.00± 0.10	4.00± 0.10	4.00± 0.10	2.00± 0.10	1.68± 0.10	2.44± 0.10	1.55± 0.05	3.50± 0.10	1.75± 0.10	0.22± 0.05	1.04± 0.10



Reel Dimensions

Tape spc code	A	N	W1	W2
0805(B)	180+0/-1.5	60+1/-0	9.0+1/-0	13.0+1/-0



Storage

The maximum ambient temperature shall not exceed 40°C. Storage temperatures higher than 40°C could result in the deformation of packaging materials. The maximum relative humidity recommended for storage is 70%. High humidity with high temperature can accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components. Sealed plastic bags with desiccant shall be used to reduce the oxidation of the termination and shall only be opened prior to use. The products shall not be stored in areas where harmful gases containing sulfur or chlorine are present.

Warning:

PPTC devices are intended for protection against occasional over-current or over-temperature 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.

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