

FEATURES

- Improved component design in a compact case
- High surge current capability of up to 2.5 kA
- Superior performance at high temperature
- White package design without shadow in LED lighting application
- SMD mountable disk varistors, suitable for lead-free reflow / wave soldering

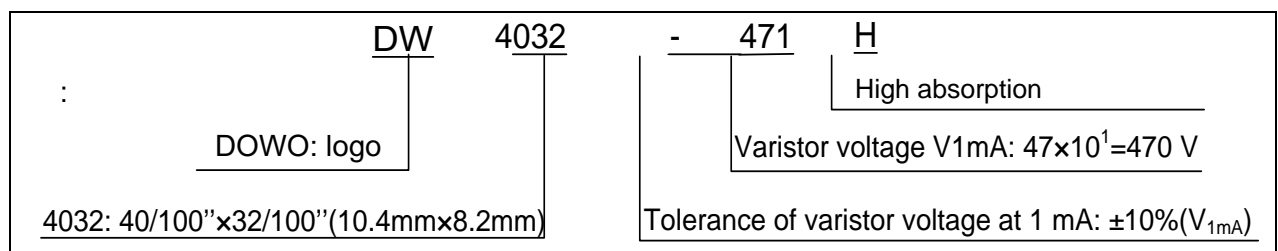
APPLICATIONS

- Power supplies for telecommunication systems
- Protection for LED circuits
- Protection for consumer, industrial equipment
- Protection for automotive electronics

APPLICABLE STANDARDS

- UL1449
- IEC61051-1, -2, -2-2, IEC60950-1 Annex Q
- IEC61000-4-5

TYPE CODE DESIGNATION



GENERAL TECHNICAL DATA

Parameter	Value	Unit
Operating temperature	-55 to +125	°C
Storage temperature	-55 to +150	°C
Electric strength	≥ 2.5	kV _{RMS}
Insulation resistance	≥ 100	MΩ



ELECTRICAL CHARACTERISTICS

(Ta=125°C)

SMD Types (EIA Case 40x32 in inch)	Continuous Voltage		Peak Current (8/20 μs)		Energy (2 ms)	Rated Power
	Max		Max		Max	
	V _{RMS}	V _{DC}	(1 time)	(2 times)	(1 time)	
	[V]	[V]	[A]	[A]	[J]	
DW4032 - 271H	175	225	2500	1500	35	400
DW4032 - 431H	275	350	2500	1500	55	400
DW4032 - 471H	300	385	2500	1500	60	400
DW4032 - 511H	320	420	2500	1500	67	400
DW4032 - 561H	350	460	2500	1500	67	400
DW4032 - 621H	385	505	2500	1500	67	400



(Ta=25°C)

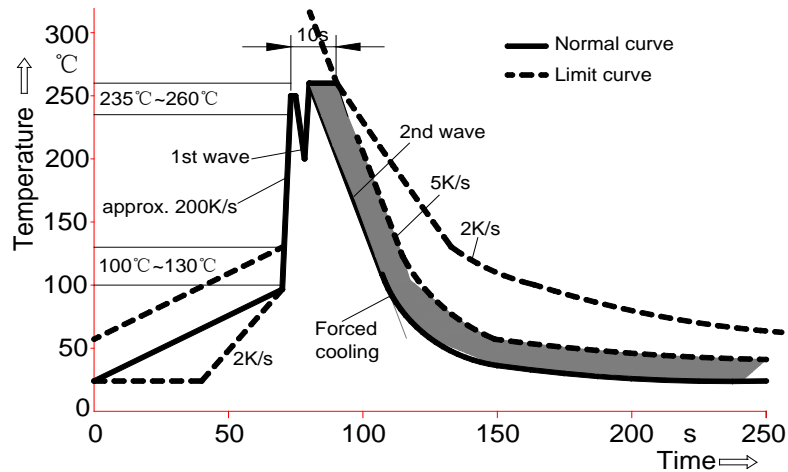
SMD Types (EIA Case 40x32 in inch)	Varistor Voltage at 1 mA	Clamping Voltage at Class Current (8/20 μs)	Class Current (8/20 μs)	Capacitance
	(±10%)			Max
	[V]	[V]	[A]	(at 1 kHz) [pF]
DW4032 - 271H	270	455	25	350
DW4032 - 431H	430	710	25	270
DW4032 - 471H	470	775	25	230
DW4032 - 511H	510	845	25	210
DW4032 - 561H	560	930	25	200
DW4032 - 621H	620	1025	25	190

SOLDERING GUIDELINES

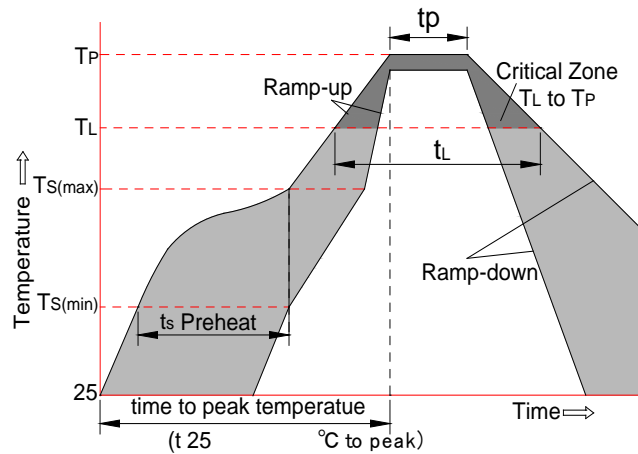
The usage of mild, non-activated fluxes for soldering is recommended, as well as proper cleaning of the PCB.

The components are suitable for reflow soldering per JEDEC J-STD-020C.

- Wave soldering



Temperature characteristics at component terminal with dual-wave soldering

- Reflow soldering


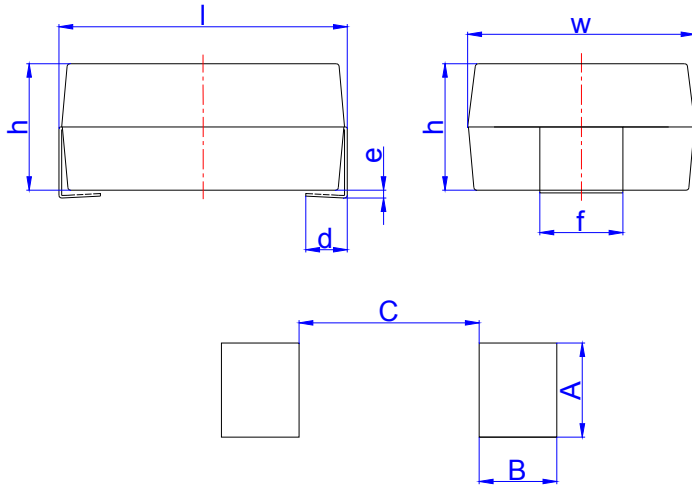
Profile feature		Sn-Pb assembly	Pb-Free assembly
Average ramp-up rate (T_{Smax} to T_p)		3°C/sec. Max	3°C/sec. Max
Preheat	-Temperature min. ($T_{S(min)}$)	+100°C	+150°C
	-Temperature max. ($T_{S(max)}$)	+150°C	+200°C
	-Time (t_{Smin} to t_{Smax})	60-120 secs.	60-180 secs.
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max	3°C/sec. Max
Time maintained above	-Temperature min. (T_L)	+183°C	+217°C
	-Time (t_L)	60-150 secs.	60-150 secs.
Peak classification temperature (T_p)		+220°C to +240°C	+240°C to +260°C
Time within 5°C of actual peak temperature (t_p)		10 secs. to 30 secs.	20 secs. to 40 secs.
Ramp-down rate		6°C/sec. max.	6°C/sec. max.
Time 25°C to peak temperature		6 min. max.	8 min. max.

Notes: All temperature refer to topside of the package, measured on the package body surface
 Maximum number of reflow cycles: 3

STORAGE CONDITION

- As far as possible, the components should be employed within 24 months after delivery from Kangtai Semiconductor.
- They should be left in their original packing to avoid soldering problems due to oxidized contacts.
- Storage temperature: - 25 up to + 45°C.
- Relative humidity: < 75 % annual average, < 95 % on max. 30 days in a year.

DIMENSIONAL DRAWINGS

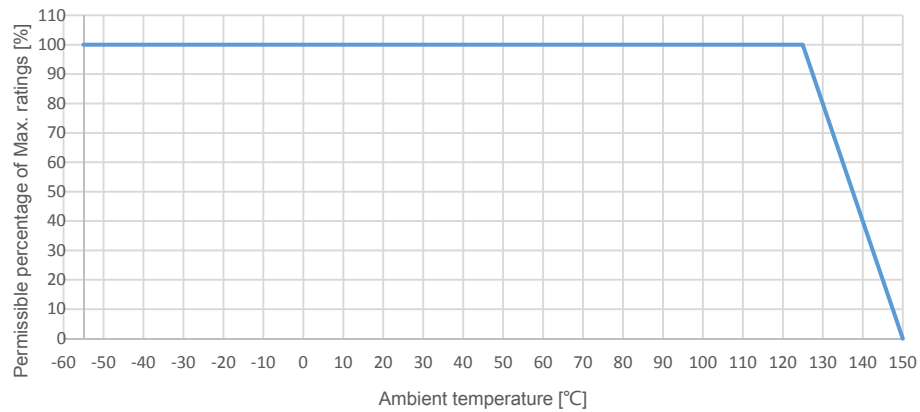


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
l	10.20		11.00	0.402		0.433
w	7.90		8.50	0.311		0.335
h	4.40		5.00	0.173		0.197
d	1.20		1.80	0.047		0.071
e	0		0.30	0		0.012
f	2.70		3.30	0.106		0.130
A		3.50			0.138	
B		2.80			0.110	
C		6.50			0.256	

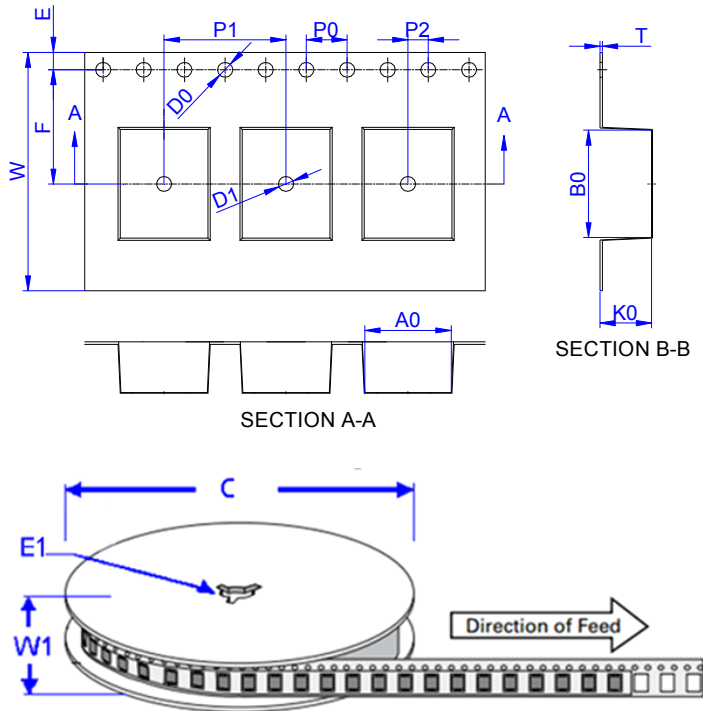
Recommended solder pad layout

TEMPERATURE RATING CURVE

Max. current, energy, operating voltage and average power dissipation depending on ambient temperature



TAPING AND PACKAGING SPECIFICATION-SMD-4032



Ref.	Dimensions	
	Millimeters	Inches
A0	8.50±0.10	0.335±0.004
B0	10.80±0.10	0.425±0.004
C	330.0	13.0
D0	1.50±0.10	0.059±0.004
D1	1.50±0.10	0.059±0.004
E	1.75±0.10	0.069±0.004
E1	13.3±0.3	0.524±0.012
F	11.50±0.10	0.453±0.004
K0	5.10±0.10	0.201±0.004
P0	4.00±0.10	0.157±0.004
P1	12.00±0.10	0.472±0.004
P2	2.00±0.10	0.079±0.004
T	0.30±0.05	0.012±0.002
W	24.00±0.30	0.945±0.012
W1	28.5±2.0	1.122±0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
TAPING	0.8535	1,000	8,000	13 inch reel pack