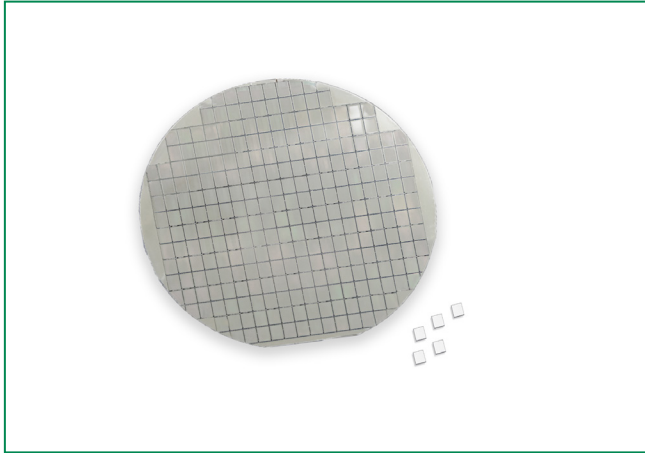


SZW200 / SZD200 Series

5 kW 200 Mil Planar TVS Wafer / Die for Automotive and High Reliability



Description

The new SZW200/SZD200 wafer/die is designed for automotive and high reliability applications of vehicles (ISO7637-2 / ISO16750) and avionics (DO-160), to provide 5kW (10x1000 μs) power rating over voltage protection.

Features

- 5kWTVS in wafer or die form
- Double sides Ti / Ni / Ag metalization
- Manufactured by Automotive / High Reliability production line with good traceability

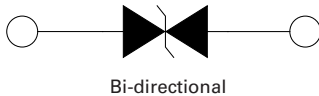
Absolute Maximum Ratings

Symbol	Parameter	Condition
T_J	Operating Temperature	150 °C
T_{STOR}	Storage Temperature	Vacuum seal: 25 °C ± 5 °C, ≤ 75 % RH, store in nitrogen gas holder for six months. Notice: Need to finish assembly and packaging within 5 days (120 hours) after open the packing.

Applications

- Power Train and other high power protection in Electrical Vehicles
- Airplane Power Train, and other DO-160 protections

Functional Diagram



Electrical Characteristics ($T_{OP}=25\text{ °C}$)

Part Number (Wafer)	Part Number (Bare Die)	Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_{BR}		Breakdown Current I_{BR} (mA)	Maximum standby current $I_D @ V_R$ (μA)	Peak Pulse Current I_{PP} (10/1000μs) (A)	Maximum Clamping Voltage $V_C @ I_{PP}$ (10/1000μs) (V)	Peak Pulse Power P_{PPM} (W)	Typical Temperature coefficient of V_{BR} (%/C)
			MIN	MAX						
SZW200PTT024BB	SZD200PTT024B	24	26.80	29.70	1	1	128.30	39.0	5000	0.1
SZW200PTT026BB	SZD200PTT026B	26	28.90	31.90	1	1	119.00	42.1	5000	0.1
SZW200PTT028BB	SZD200PTT028B	28	31.30	34.59	1	1	110.50	45.3	5000	0.1
SZW200PTT030BB	SZD200PTT030B	30	33.50	37.10	1	1	102.80	48.7	5000	0.1
SZW200PTT033BB	SZD200PTT033B	33	36.90	40.70	1	1	93.60	53.5	5000	0.1
SZW200PTT036BB	SZD200PTT036B	36	40.30	44.50	1	1	85.60	58.5	5000	0.1

Note: Parameter is guaranteed by package characterization

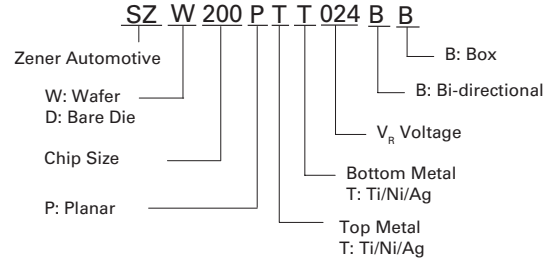
SZW200 / SZD200 Series

5 kW 200 Mil Planar TVS Wafer / Die for Automotive and High Reliability

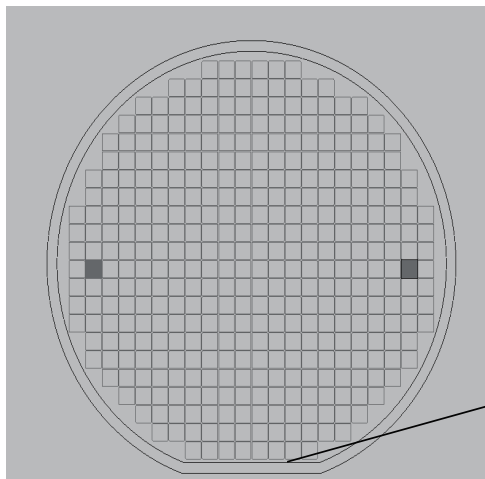
Packaging

Component Package	Packaging Option
Wafer	Box

Part Numbering



Physical Dimensions- Wafer



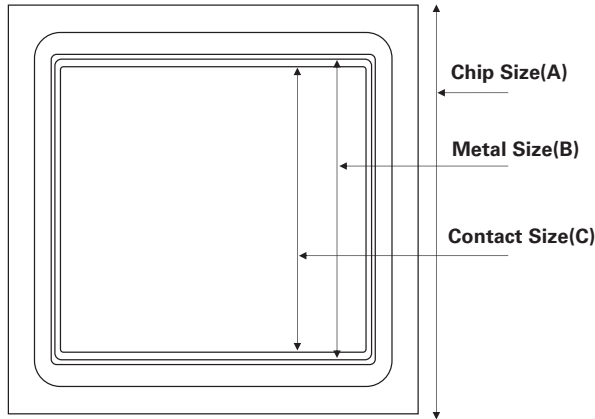
Effective area
Invalid area

5" wafer size	125.0 ± 0.2 mm
Primary Flat length	42.5 ± 2.5 mm

SZW200 / SZD200 Series

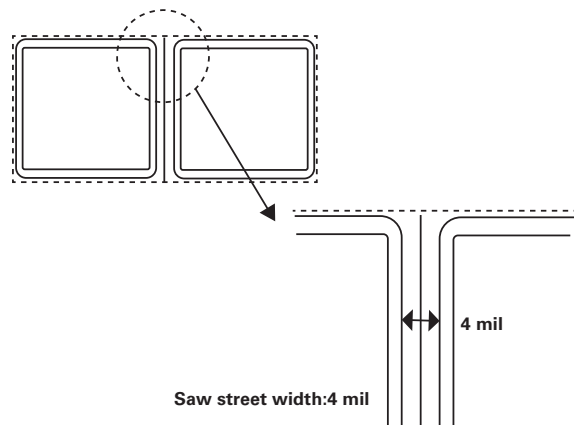
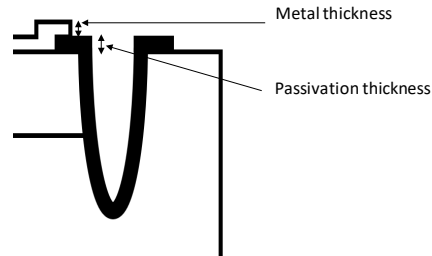
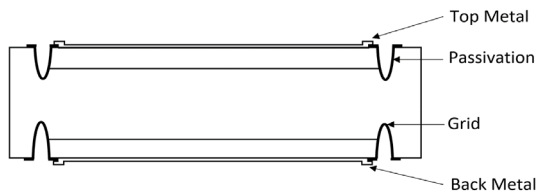
5 kW 200 Mil Planar TVS Wafer / Die for Automotive and High Reliability

Physical Dimensions - Bare Die



Die size (Ax, Ay)	200 x 200 mil
Metal size (Bx, By)	186 x 186 mil
Contact size (Cx, Cy)	183 x 183 mil
Grid depth	27 μm
Die thickness	300 μm
Passivation thickness	1.9 μm
Top metalization	Ti / Ni / Ag
Top metal thickness	1.1 μm
Back metalization	Ti / Ni / Ag
Back metal thickness	1.1 μm

Note: Parameter is guaranteed by package characterization



Packing Specification

For detail packing size or specification, please contact with Littelfuse®.

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