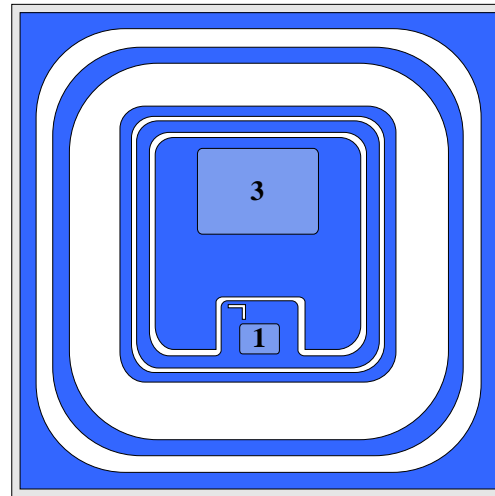


**3VD212800YL HIGH VOLTAGE MOSFET CHIPS**
**DESCRIPTION**

- ∅ 3VD212800YL is a High voltage N-Channel enhancement mode power MOS-FET chip fabricated in advanced silicon epitaxial planar technology.
- ∅ Advanced termination scheme to provide enhanced voltage-blocking capability.
- ∅ Avalanche Energy Specified
- ∅ Source-to-Drain Diode Recovery Time Comparable to a Discrete Fast Recovery Diode
- ∅ The chips may packaged in TO-220 type and the typical equivalent product is 1N80.
- ∅ The packaged product is widely used in AC-DC power suppliers, DC-DC converters and H-bridge PWM motor drivers.
- ∅ Die size: 2.12mm\*2.02mm.
- ∅ Chip Thickness: 300±20µm.
- ∅ Top metal : Al, Backside Metal : Ag.



PAD1:GATE      PAD3:SOURCE  
 CHIP TOPOGRAPHY

**ABSOLUTE MAXIMUM RATINGS (T<sub>amb</sub>=25°C)**

| Parameter                          | Symbol           | Ratings  | Unit |
|------------------------------------|------------------|----------|------|
| Drain-Source Voltage               | V <sub>DS</sub>  | 800      | V    |
| Gate-Source Voltage                | V <sub>GS</sub>  | ±30      | V    |
| Drain Current                      | I <sub>D</sub>   | 1.0      | A    |
| Power Dissipation (TO-220 Package) | P <sub>D</sub>   | 45       | W    |
| Operation Junction Temperature     | T <sub>J</sub>   | -55~+150 | °C   |
| Storage Temperature                | T <sub>stg</sub> | -55~+150 | °C   |

**ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C)**

| Parameter                                | Symbol              | Test conditions   | Min | Typ | Max | Unit |
|--|---------------------|---|-----|-----|-----|------|
| Drain -Source Breakdown Voltage          | BV <sub>DSS</sub>   | V <sub>GS</sub> =0V, I <sub>D</sub> =250µA                | 800 | -   | -   | V    |
| Gate Threshold Voltage                   | V <sub>TH</sub>     | V <sub>GS</sub> = V <sub>DS</sub> , I <sub>D</sub> =250µA | 3   | -   | 4.5 | V    |
| Drain-Source Leakage Current             | I <sub>DSS</sub>    | V <sub>DS</sub> =800V, V <sub>GS</sub> =0V                | -   | -   | 1   | µA   |
| Static Drain- Source On State Resistance | R <sub>DS(on)</sub> | V <sub>GS</sub> =10V, I <sub>D</sub> =0.5A                | -   | -   | 16  | Ω    |
| Gate-Source Leakage Current              | I <sub>GSS</sub>    | V <sub>GS</sub> =±20V, V <sub>DS</sub> =0V                | -   | -   | ±10 | µA   |
| Source-Drain Diode Forward on Voltage    | V <sub>FSD</sub>    | I <sub>S</sub> =1A, V <sub>GS</sub> =0V                   | -   | -   | 1.6 | V    |