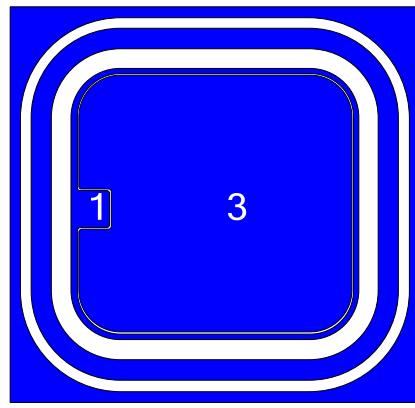


## 3VD156600YL HIGH VOLTAGE MOSFET CHIPS

### DESCRIPTION

- 3VD156600YL 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-92DT-3L type and the typical equivalent product is 1N60SS.
- The packaged product is widely used in AC-DC power suppliers, DC-DC converters and H-bridge PWM motor drivers.
- Die size: 1.6mm\*1.54mm.
- Chip Thickness:  $300\pm20\mu\text{m}$ .
- Top metal: Al, Backside Metal : Ag.



**CHIP TOPOGRAPHY**

### ABSOLUTE MAXIMUM RATINGS ( $T_{\text{amb}}=25^\circ\text{C}$ )

| Parameter                      | Symbol           | Ratings  | Unit             |
|--------------------------------|------------------|----------|------------------|
| Drain-Source Voltage           | $V_{\text{DS}}$  | 600      | V                |
| Gate-Source Voltage            | $V_{\text{GS}}$  | $\pm 30$ | V                |
| Drain Current                  | $I_D$            | 500      | mA               |
| Operation Junction Temperature | $T_J$            | 150      | $^\circ\text{C}$ |
| Storage Temperature            | $T_{\text{stg}}$ | -55-150  | $^\circ\text{C}$ |

### ELECTRICAL CHARACTERISTICS ( $T_{\text{amb}}=25^\circ\text{C}$ )

| Parameter                             | Symbol                      | Test conditions  | Min. | Typ. | Max.      | Unit          |
|---------------------------------------|-----------------------------|--|------|------|-----------|---------------|
| Drain-Source Breakdown Voltage        | $V_{(\text{BR})\text{DSS}}$ | $V_{\text{GS}} = 0\text{V}$ , $I_D = 250\mu\text{A}$           | 600  | ---  | ---       | V             |
| Gate-Threshold Voltage                | $V_{\text{th}(\text{GS})}$  | $I_D = 250\mu\text{A}$ , $V_{\text{DS}} = V_{\text{GS}}$       | 2.0  | ---  | 4.0       | V             |
| Gate-Body Leakage                     | $I_{\text{GSS}}$            | $V_{\text{GS}} = \pm 30\text{V}$ , $V_{\text{DS}} = 0\text{V}$ | ---  | ---  | $\pm 100$ | nA            |
| Zero Gate Voltage Drain Current       | $I_{\text{DSS}}$            | $V_{\text{DS}} = 600\text{V}$ , $V_{\text{GS}} = 0\text{V}$    | ---  | ---  | 1.0       | $\mu\text{A}$ |
| Drain-Source On-Resistance            | $R_{\text{DS}(\text{on})}$  | $I_D = 0.5\text{A}$ , $V_{\text{GS}} = 10\text{V}$             | ---  | ---  | 13.5      | $\Omega$      |
| Source-Drain Diode Forward On Voltage | $V_{\text{FSD}}$            | $I_D = 0.8\text{A}$ , $V_{\text{GS}} = 0\text{V}$              | ---  | ---  | 1.0       | V             |