



# SL2060DS

## LOW VF SCHOTTKY BARRIER RECTIFIERS

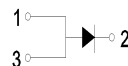
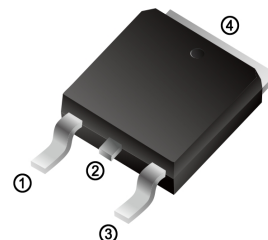
REVERSE VOLTAGE - **60** Volts

FORWARD CURRENT - **20.0** Amperes

**TO-252(D-PAK)**

### FEATURES

- Low power loss,high efficiency
- Low forward voltage drop
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER                                                                         | SYMBOL          | VALUE        | UNIT |
|-----------------------------------------------------------------------------------|-----------------|--------------|------|
| Maximum repetitive peak reverse voltage                                           | $V_{RRM}$       | 60           | V    |
| Maximum rms voltage                                                               | $V_{RMS}$       | 42           | V    |
| Maximum average forward rectified current                                         | $I_{F(AV)}$     | 20           | A    |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 180          | A    |
| Typical junction capacitance ( $V_R=4V$ , $f=1MHz$ )                              | $C_J$           | 650          | pF   |
| Typical thermal resistance (Note 1)                                               | $R_{\theta JC}$ | 15           | °C/W |
| Operating junction temperature range                                              | $T_J$           | -55 to + 150 | °C   |
| Storage temperature range                                                         | $T_{STG}$       | -55 to + 150 | °C   |

Note : 1. Mounted on infinite heatsink.

### ELECTRICAL CHARACTERISTICS( $T_A=25^\circ C$ unless otherwise noted)

| PARAMETER                     | SYMBOL   | TEST CONDITIONS               | MIN. | TYP. | MAX. | UNIT    |
|-------------------------------|----------|-------------------------------|------|------|------|---------|
| Breakdown voltage             | $V_{BR}$ | $I_R=0.5mA$                   | 60   | -    | -    | V       |
| Instantaneous forward voltage | $V_F$    | $I_F=3A$<br>$T_J=25^\circ C$  | -    | 0.36 | -    | V       |
|                               |          | $I_F=5A$                      | -    | 0.38 | -    | V       |
|                               |          | $I_F=20A$                     | -    | 0.55 | 0.60 | V       |
|                               |          | $I_F=1A$<br>$T_J=125^\circ C$ | -    | 0.25 | -    | V       |
| Reverse current               | $I_R$    | $I_F=5A$<br>$T_J=125^\circ C$ | -    | 0.35 | -    | V       |
|                               |          | $I_F=20A$                     | -    | 0.50 | -    | V       |
|                               |          | $V_R=42V$                     | -    | 5    | -    | $\mu A$ |
| Reverse current               | $I_R$    | $V_R=60V$<br>$T_J=25^\circ C$ | -    | -    | 100  | $\mu A$ |
|                               |          | $T_J=125^\circ C$             | -    | 25   | -    | mA      |



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### Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

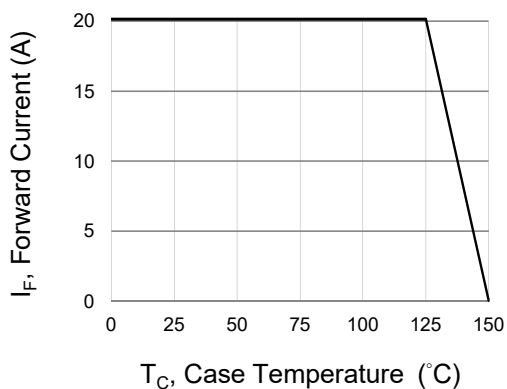


Fig.1 Forward Current Derating Curve

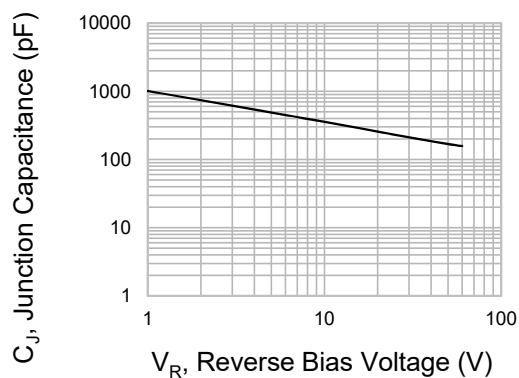


Fig.2 Typical Junction Capacitance

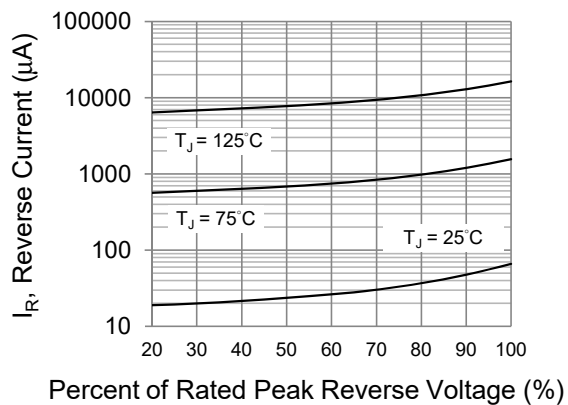


Fig.3 Typical Reverse Characteristics

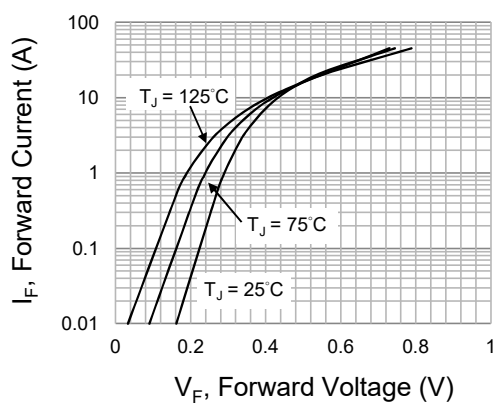


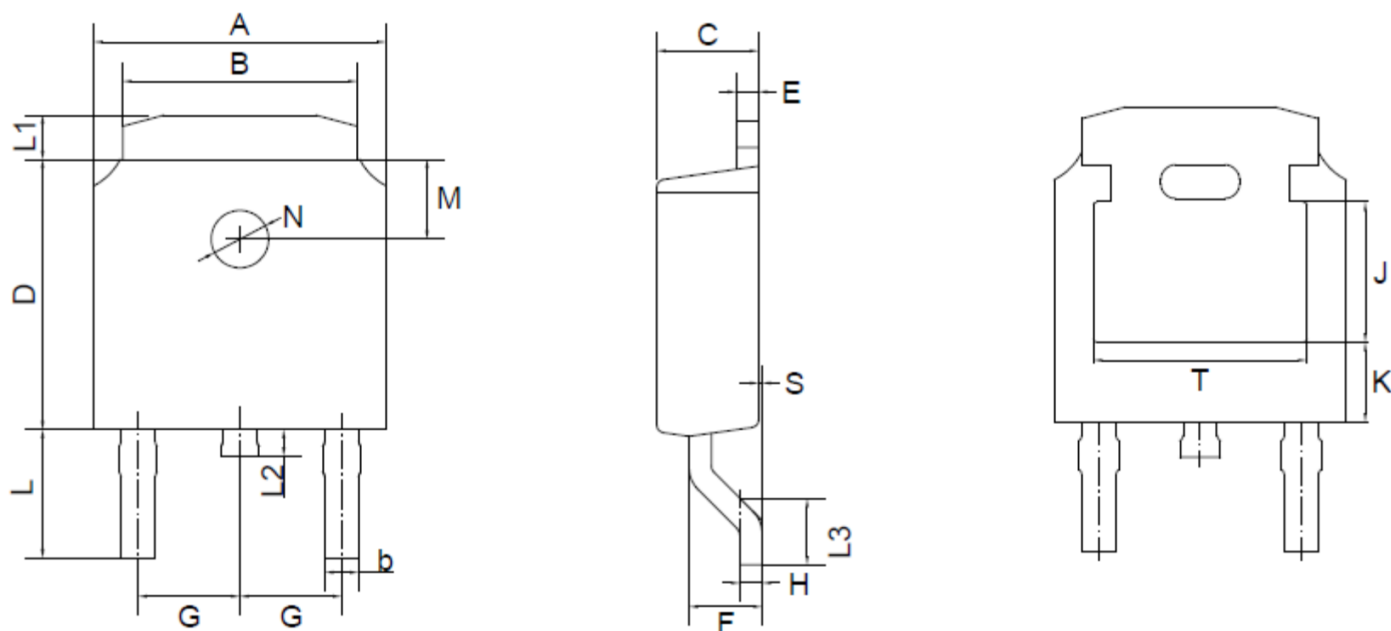
Fig.4 Typical Forward Characteristics



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## LOW VF SCHOTTKY BARRIER RECTIFIERS

### TO-252(D-PAK) Package Outline Dimensions



TO-252(D-PAK) mechanical data

| UNIT |     | A   | B   | b   | C   | D   | E   | F   | G       | H    | L   | L1  | L2  | L3   | S   | M       | N       | J    | K    | T    |
|------|-----|-----|-----|-----|-----|-----|-----|-----|---------|------|-----|-----|-----|------|-----|---------|---------|------|------|------|
| mm   | max | 6.7 | 5.5 | 0.8 | 2.5 | 6.3 | 0.6 | 1.8 | 2.29    | 0.55 | 3.1 | 1.2 | 1.0 | 1.75 | 0.1 | 1.8     | 1.3     | 3.16 | 1.80 | 4.83 |
|      | min | 6.3 | 5.1 | 0.3 | 2.1 | 5.9 | 0.4 | 1.3 | TYPICAL | 0.45 | 2.7 | 0.8 | 0.6 | 1.40 | 0.0 | TYPICAL | TYPICAL | ref. | ref. | ref. |
| mil  | max | 264 | 217 | 31  | 98  | 248 | 24  | 71  | 90      | 22   | 122 | 47  | 39  | 69   | 4   | 71      | 51      | 124  | 71   | 190  |
|      | min | 248 | 201 | 12  | 83  | 232 | 16  | 51  | TYPICAL | 18   | 106 | 31  | 24  | 55   | 0   | TYPICAL | TYPICAL | ref. | ref. | ref. |