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# ES2F, ES2G

## Vishay General Semiconductor

| <b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25 \text{ °C}$ unless otherwise noted) |  |                         |                               |      |      |      |  |  |
|---|--|-------------------------|-------------------------------|------|------|------|--|--|
| PARAMETER   | TEST CONDITIONS  |                         | SYMBOL                        | ES2F | ES2G | UNIT |  |  |
| Maximum instantaneous forward voltage   | 2.0 A  |                         | V <sub>F</sub> <sup>(1)</sup> | 1.1  |      | V    |  |  |
| Maximum reverse current at V <sub>RRM</sub>                                       |  | T <sub>A</sub> = 25 °C  | 1-                            | 10   |      | μΑ   |  |  |
|   |  | T <sub>A</sub> = 100 °C | I <sub>R</sub>                | 200  |      |      |  |  |
| Maximum reverse recovery time   | $I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{rr} = 0.25 \text{ A}$    |                         | t <sub>rr</sub>               | 35   |      | ns   |  |  |
| Maximum reverse recovery time   | $I_F$ = 1.0 A, dl/dt = 100 A/µs, $V_R$ = 30 V, $I_{rr}$ = 0.1 $I_{RM}$ |                         | t <sub>rr</sub>               | 50   |      | ns   |  |  |
| Maximum reverse recovery current  | $I_F$ = 1.0 A, dl/dt = 100 A/µs, $V_R$ = 30 V, $I_{rr}$ = 0.1 $I_{RM}$ |                         | I <sub>RM</sub>               | 3.0  |      | А    |  |  |
| Maximum stored charge   | $I_F$ = 1.0 A, dI/dt = 100 A/µs, $V_R$ = 30 V, $I_{rr}$ = 0.1 $I_{RM}$ |                         | Q <sub>rr</sub>               | 50   |      | nC   |  |  |
| Typical junction capacitance  | 4.0 V, 1 MHz   |                         | CJ                            | 15   |      | pF   |  |  |

#### Note

 $^{(1)}\,$  Pulse test: 300  $\mu s$  pulse width, 1  $\,\%$  duty cycle

| <b>THERMAL CHARACTERISTICS</b> ( $T_A = 25 \text{ °C}$ unless otherwise noted) |                                 |      |      |      |  |  |  |
|--|---------------------------------|------|------|------|--|--|--|
| PARAMETER  | SYMBOL                          | ES2F | ES2G | UNIT |  |  |  |
| Maximum thermal resistance   | R <sub>0JA</sub> <sup>(1)</sup> | 75   |      | °C/W |  |  |  |
|  | R <sub>0JL</sub> <sup>(1)</sup> | 25   |      |      |  |  |  |

#### Note

 $^{(1)}\,$  Units mounted on PCB 5.0 mm x 5.0 mm (0.013 mm thick) land areas

| ORDERING INFORMATION (Example) |                 |                        |               |                                    |  |  |  |  |
|--------------------------------|-----------------|------------------------|---------------|------------------------------------|--|--|--|--|
| PREFERRED P/N                  | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE                      |  |  |  |  |
| ES2G-E3/52T                    | 0.096           | 52T                    | 750           | 7" diameter plastic tape and reel  |  |  |  |  |
| ES2G-E3/5BT                    | 0.096           | 5BT                    | 3200          | 13" diameter plastic tape and reel |  |  |  |  |
| ES2GHE3_A/H <sup>(1)</sup>     | 0.096           | Н                      | 750           | 7" diameter plastic tape and reel  |  |  |  |  |
| ES2GHE3_A/I <sup>(1)</sup>     | 0.096           | I                      | 3200          | 13" diameter plastic tape and reel |  |  |  |  |

Note

<sup>(1)</sup> AEC-Q101 qualified



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### RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)

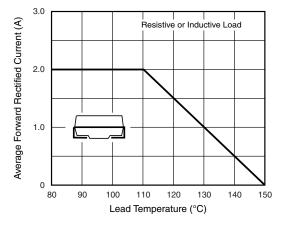


Fig. 1 - Maximum Forward Current Derating Curve

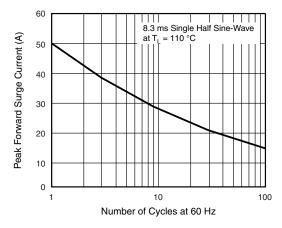


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

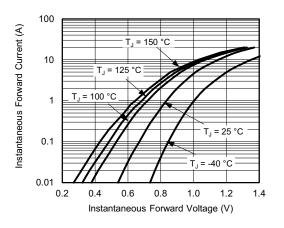


Fig. 3 - Typical Instantaneous Forward Characteristics

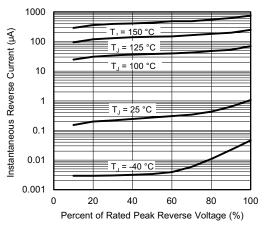


Fig. 4 - Typical Reverse Leakage Characteristics

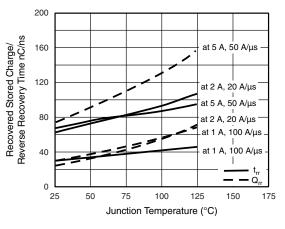


Fig. 5 - Reverse Switching Characteristics

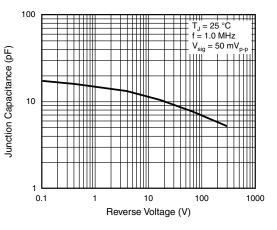


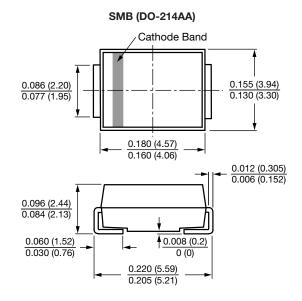
Fig. 6 - Typical Junction Capacitance

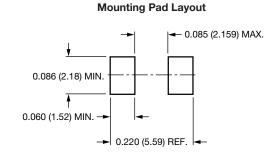
Revision: 13-May-2020 3 Document Number: 88588 For technical questions within your region: <u>DiodesAmericas@vishay.com</u>, <u>DiodesAsia@vishay.com</u>, <u>DiodesEurope@vishay.com</u> THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT <u>www.vishay.com/doc?91000</u>

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### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)







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