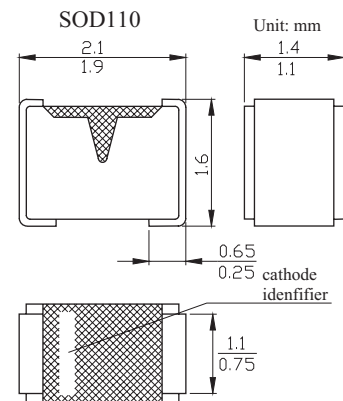


HIGH-SPEED SWITCHING DIODE

BAS216

■ Features

- Small ceramic SMD package
- High switching speed: max. 4 ns
- Continuous reverse voltage: max. 75V
- Repetitive peak reverse voltage: max. 85V
- Repetitive peak forward current: max. 500 mA.



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Max | Unit |
|-------------------------------------|------------------|--|-----|---------------|------------------|
| Continuous peak reverse voltage | VRRM | | | 85 | V |
| Continuous reverse voltage | V _R | | | 75 | V |
| Continuous forward current | I _F | Note 1 | | 250 | mA |
| Repetitive peak forward current | I _{FSM} | | | 500 | mA |
| Non-repetitive peak forward current | I _{FSM} | square wave; $T_j = 25^\circ\text{C}$ prior to surge; $t = 1\ \mu\text{s}$ $t = 1\ \text{ms}$ $t = 1\ \text{s}$ | | 4 1 0.5 | A |
| Total power dissipation | P _{tot} | $T_{\text{amb}} = 25^\circ\text{C}$; note 1 | | 400 | mW |
| Storage temperature | T _{stg} | | -65 | +150 | $^\circ\text{C}$ |
| Junction temperature | T _j | | | 150 | $^\circ\text{C}$ |

Note

1. Device mounted on an FR4 printed-circuit board.

HIGH-SPEED SWITCHING DIODE

BAS216

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Max | Unit |
|-----------------------------|----------|--|-----|------|----------------|
| forward voltage | V_F | $I_F = 1\text{ mA}$ | | 715 | mV |
| | | $I_F = 10\text{ mA}$ | | 855 | mV |
| | | $I_F = 50\text{ mA}$ | | 1 | V |
| | | $I_F = 150\text{ mA}$ | | 1.25 | V |
| capacitance reverse current | I_R | $V_R = 25\text{ V}$ | | 30 | nA |
| | | $V_R = 75\text{ V}$ | | 1 | $\mu\text{ A}$ |
| | | $V_R = 25\text{ V}, T_j = 150^\circ\text{C}$ | | 30 | $\mu\text{ A}$ |
| | | $V_R = 25\text{ V}, T_j = 150^\circ\text{C}$ | | 50 | $\mu\text{ A}$ |
| diodes capacitance | C_d | $V_R = 1\text{ V}, f = 1\text{ MHz}$ | | 1.5 | pF |
| reverse recovery time | t_{rr} | when switched from $I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}; R_L = 100\ \Omega$ measured at $I_R = 1\text{ mA}$ | | 4 | ns |
| forward recovery voltage | V_{rr} | when switched from $I_F = 10\text{ mA}; t_r = 20\text{ ns}$ | | 1.75 | V |

Note

1.Pulsed test: $t_p = 300\ \mu\text{ s}, \delta = 0.02$.

■ Marking

| | |
|---------|----|
| Marking | A6 |
|---------|----|