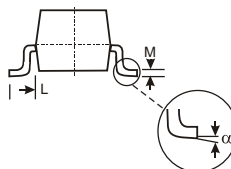
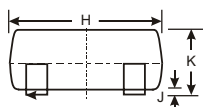
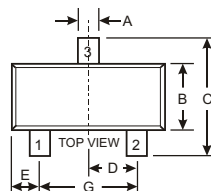


Features

- High conductance.
- Fast switching.
- Surface mount package ideally suited for automatic insertion
- Marking Code:5BM

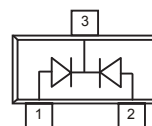


| SOT-23 | | |
|----------------------|-------|-------|
| Dim | Min | Max |
| A | 0.37 | 0.51 |
| B | 1.20 | 1.40 |
| C | 2.30 | 2.50 |
| D | 0.89 | 1.03 |
| E | 0.45 | 0.60 |
| G | 1.78 | 2.05 |
| H | 2.80 | 3.00 |
| J | 0.013 | 0.10 |
| K | 0.903 | 1.10 |
| L | 0.45 | 0.61 |
| M | 0.085 | 0.180 |
| α | 0° | 8° |
| All Dimensions in mm | | |

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Parameter | Symbol | Limit | Unit |
|---|-----------------|----------|--------------------|
| Non-Repetitive Peak Reverse Voltage | V_R | 70 | V |
| Average Rectified Output Current | I_O | 200 | mA |
| Peak Forward Surge Current @ $t=1.0\mu\text{s}$ | I_{FSM} | 2.0 | A |
| Power Dissipation | P_D | 350 | mW |
| Thermal Resistance | $R_{\theta JA}$ | 357 | $^\circ\text{C/W}$ |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65~+150 | $^\circ\text{C}$ |

Equivalent Circuit



Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | ymbol | Min | MAX | UNIT | Test Condition |
|---------------------------|-------------|--------------|------------|---------------|---|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 70 | | V | $I_R = 100\mu\text{A}$ |
| Forward Voltage | V_F | 0.55 0.85 | 0.7 1.1 | V | $I_F = 1\text{mA}$ $I_F = 100\text{mA}$ |
| Reverse Leakage Current | I_R | | 0.1 | μA | $V_R = 50\text{V}$ |
| Junction Capacitance | C_j | | 2.5 | pF | $V_R = 0\text{V}, f = 1\text{MHz}$ |
| Reverse Recovery Time | t_{rr} | | 4 | ns | $I_F = I_R = 10\text{mA}$, $I_{RR} = 0.1 \cdot I_R$ $R_L = 100\Omega$ |

TYPICAL TRANSIENT CHARACTERISTICS

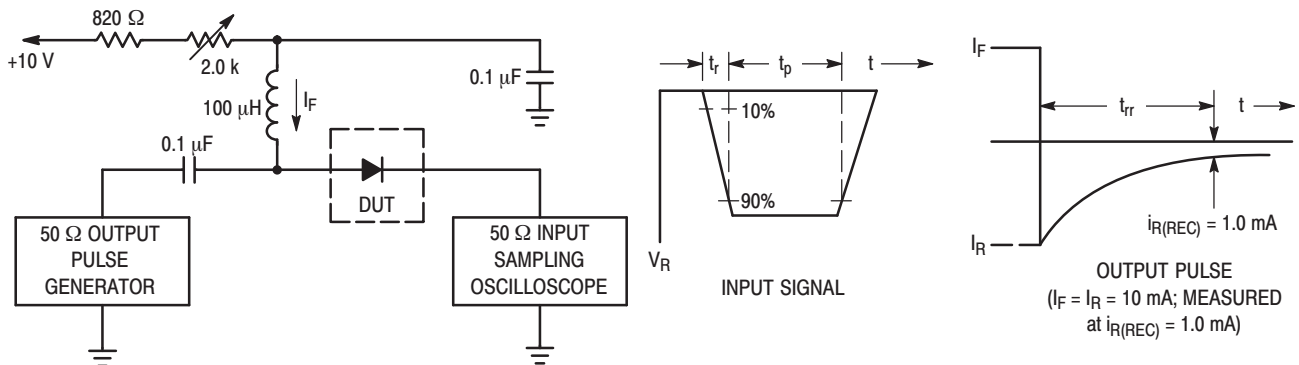


Figure 1. Recovery Time Equivalent Test Circuit

CURVES APPLICABLE TO EACH CATHODE

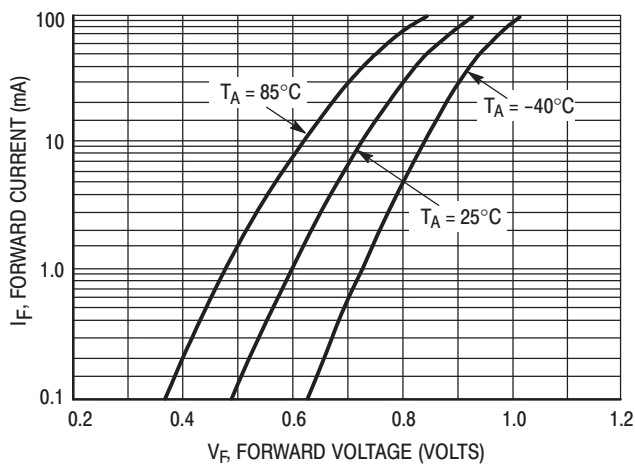


Figure 2. Forward Voltage

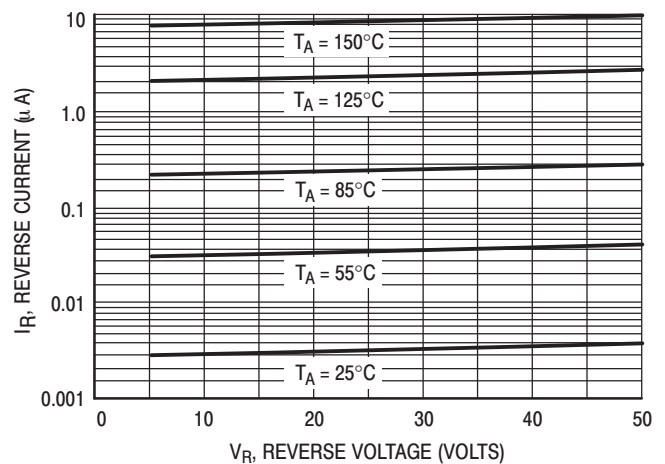


Figure 3. Leakage Current

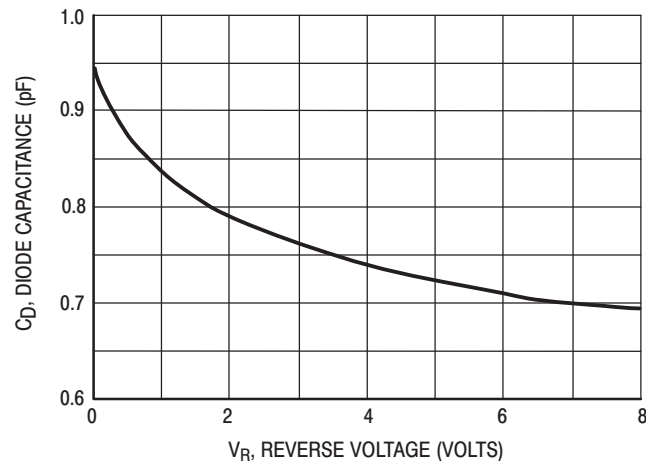


Figure 4. Capacitance

IMPORTANT NOTICE

HC-SEMI reserves the right to make changes without further notice to any products herein.

HC-SEMI makes no warranty, representation or guarantee regarding

The suitability of its products for any particular purpose, nor does HC-SEMI assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation consequential or incidental damages.

“Typical” parameters can and do vary in different applications. All operating parameters, including “Typicals” must be validated for each customer application by customer’s technical experts.

HC-SEMI products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the HC-SEMI product could create a situation where personal injury or death may occur.

Should Buyer purchase or use HC-SEMI products for any such unintended or unauthorized application, Buyer shall indemnify and hold HC-SEMI and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that HC-SEMI was negligent regarding the design or manufacture of the part.