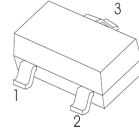


## FEATURES

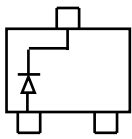
- Low turn-on voltage
- Fast switching
- Also available in lead free version

## SOT-23 Plastic-Encapsulate Diodes

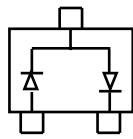
SOT-23



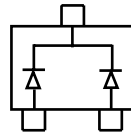
## MARKING:



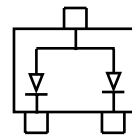
Marking: 73



Marking: 74



Marking: 75



Marking: 76

| TKBAS70                                                                            | TKBAS70-04                                                                         | TKBAS70-05                                                                         | TKBAS70-06                                                                          |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |

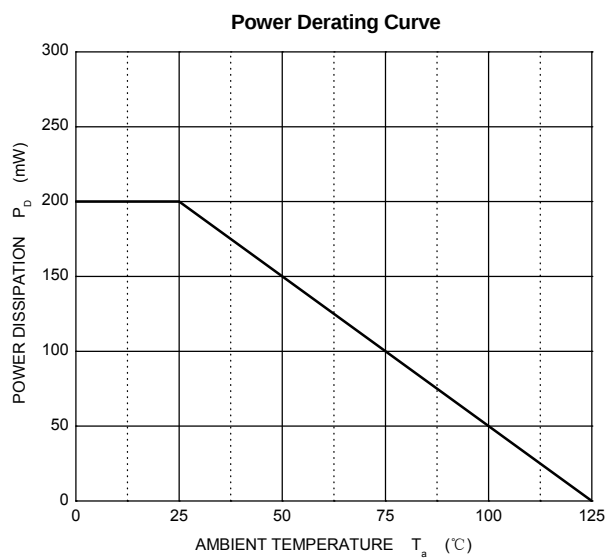
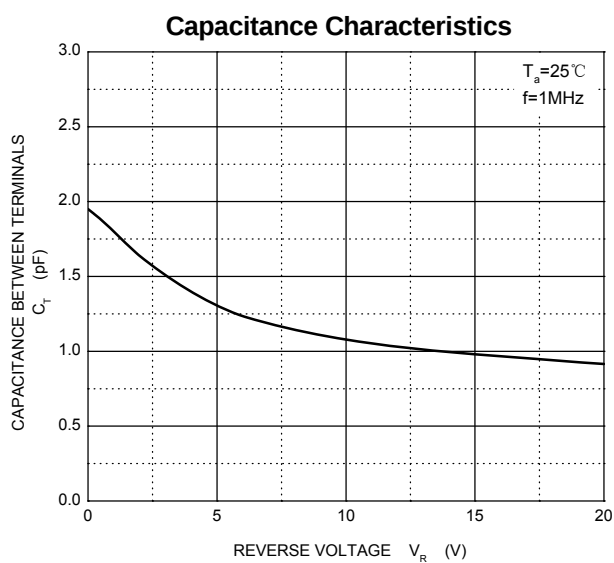
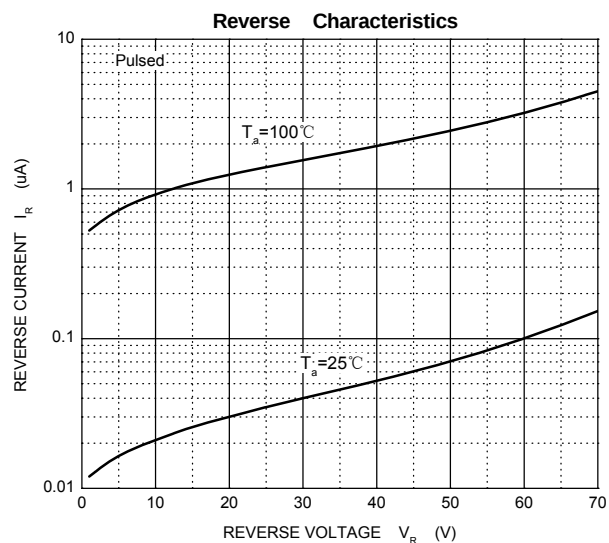
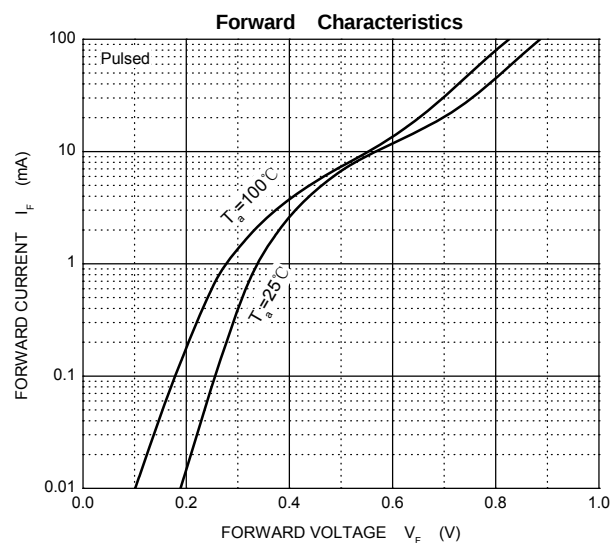
## MAXIMUM RATINGS @T<sub>a</sub>=25°C

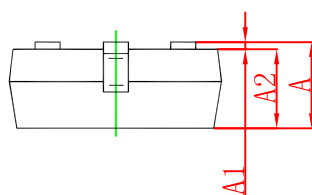
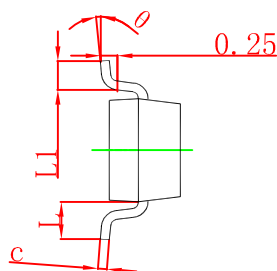
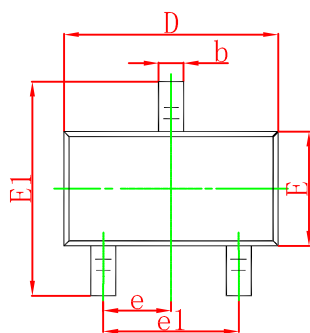
| Symbol          | Parameter                                             | Value    | Unit |
|-----------------|-------------------------------------------------------|----------|------|
| $V_R$           | DC Voltage                                            | 70       | V    |
| $I_F$           | Forward Continuous Current                            | 70       | mA   |
| $I_{FSM}$       | Non-Repetitive Peak Forward Surge Current @ t = 8.3ms | 100      | mA   |
| $P_D$           | Power Dissipation                                     | 200      | mW   |
| $R_{\theta JA}$ | Thermal Resistance Junction to Ambient                | 500      | °C/W |
| $T_J$           | Junction Temperature                                  | 125      | °C   |
| $T_{stg}$       | Storage Temperature                                   | -55~+150 | °C   |

## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

| Parameter                       | Symbol     | Test conditions                                                       | Min | Max         | Unit |
|---------------------------------|------------|-----------------------------------------------------------------------|-----|-------------|------|
| Reverse breakdown voltage       | $V_{(BR)}$ | $I_R = 10\mu A$                                                       | 70  |             | V    |
| Reverse voltage leakage current | $I_R$      | $V_R = 50V$                                                           |     | 100         | nA   |
| Forward voltage                 | $V_F$      | $I_F = 1mA$<br>$I_F = 15mA$                                           |     | 410<br>1000 | mV   |
| Diode capacitance               | $C_D$      | $V_R = 0V$ f=1MHz                                                     |     | 2           | pF   |
| Reverse recovery time           | $t_{rr}$   | $I_F = I_R = 10mA$ , $t_{rr} = 0.1 \times I_R$ ,<br>$R_L = 100\Omega$ |     | 5           | ns   |

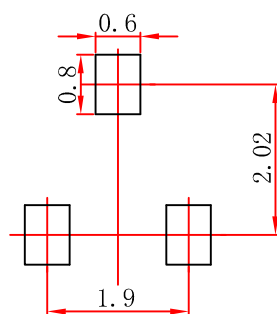
## Typical Characteristics





| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF                 |       | 0.022 REF            |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

## SOT-23 Suggested Pad Layout



Note:  
 1. Controlling dimension: in millimeters.  
 2. General tolerance:  $\pm 0.05$  mm.  
 3. The pad layout is for reference purposes only.