BAT49

SURFACE MOUNT SMALL SIGNAL SCHOTTKY DIODES

Features

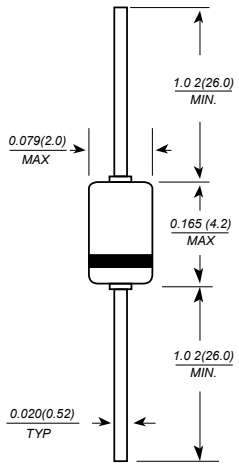
- Small foot print, surface mountable
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability

Mechanical Data

- Case: DO-35, glass case
- Polarity: Color band denotes cathode
- Weight: 0.004 ounces, 0.13 grams

RoHS COMPLIANT

DO-35(GLASS)



Dimensions in millimeters

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	80	V
Forward Continuous Current* T_a = 70 °C	I_F	500	mA
Repetitive Peak Forward Current* t_p = 1s, $\delta \leq 0.5$	I_{FRM}	3	A
Surge non Repetitive Forward Current* $t_p \leq 10ms$	I_{FSM}	10	A
Storage and Junction Temperature Range	T_{stg}	- 65 to 150	°C
	T_j	- 65 to 125	°C
Maximum Lead Temperature for Soldering during 10s at 4mm from Case	T_L	230	°C

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I_R * *	T_j = 25°C	V_R = 80V			200	µA
V_F * *	T_j = 25°C	I_F = 10mA			0.32	V
	T_j = 25°C	I_F = 100mA			0.42	
	T_j = 25°C	I_F = 1A			1	
Symbol	**Test Conditions**		**Min.**	**Typ.**	**Max.**	**Unit**
C	T_j = 25°C f = 1MHz	V_R = 0V		120		pF
		V_R = 5V		35		

Figure 1. Forward current versus forward voltage at low level (typical values).

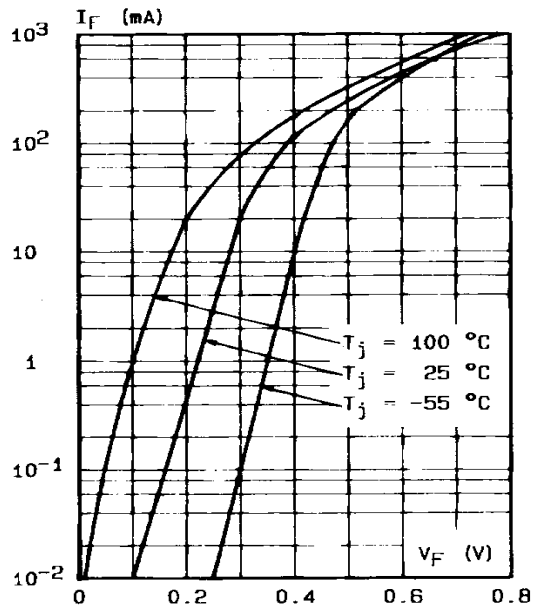


Figure 2. Forward current versus forward voltage at high level (typical values).

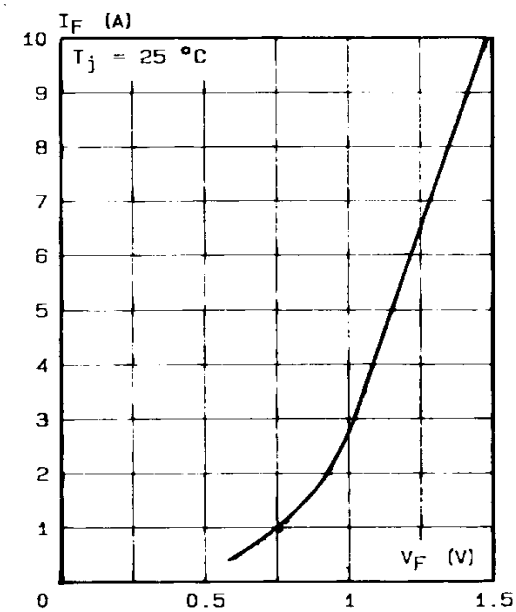


Figure 3. Reverse current versus junction temperature.

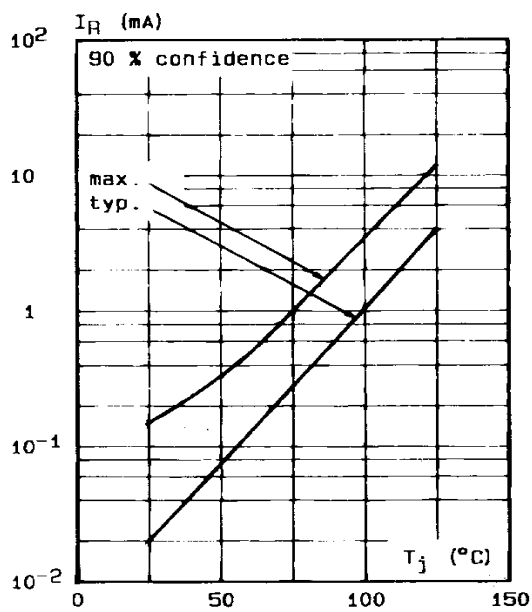


Figure 4. Reverse current versus V_{RRM} in per cent.

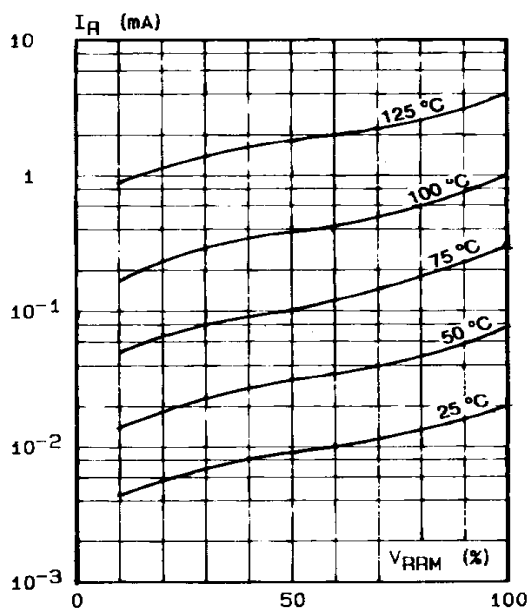


Figure 5. Capacitance C versus reverse applied voltage V_R (typical values).

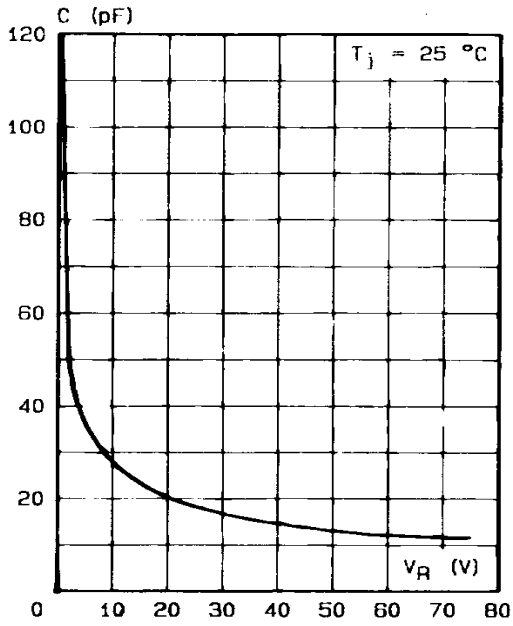


Figure 6. Surge non repetitive forward current for a rectangular pulse with t ≤ 10 ms.

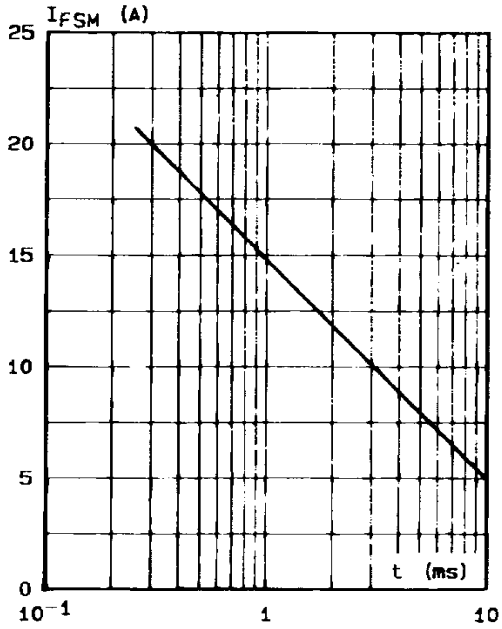


Figure 7. Surge non repetitive forward current versus number of cycles.