TAIWAN SEMICONDUCTOR

RoHS COMPLIANCE

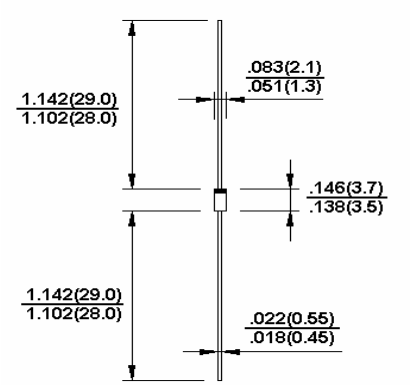
BAT42 / BAT43

200 mW Hermetically Sealed Glass Fast Switching Schottky Barrier Diode

DO-35

Features

- ✧ Low forward voltage drop
- ✧ DO-35 package (JEDEC)
- ✧ Through-hole device type mounting
- ✧ Hermetically sealed glass
- ✧ Compression bonded construction
- ✧ All external surface are corrosion resistant and leads are readily solderable
- ✧ RoHS compliant
- ✧ Solder hot dip Tin(Sn) lead finish



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°Cambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	BAT42/BAT43	Units
Power Dissipation	Pd	200	mW
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Maximum DC Blocking Voltage	V_R	30	V
Average Forward Rectified Current	$I_{F(AV)}$	200	mA
Peak Forward Surge Current	I_{FSM}	4.0	A
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 125	°C

Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Breakdown Voltage @ I_R=100uA	B_V	30		V
Forward Voltage Drop All Types				
BAT42 IF=200mA			1.0	
BAT42 IF=10mA			0.40	
BAT42 IF= 50mA	V_F		0.65	V
BAT43 IF=200mA			1.0	
BAT43 IF =2.0mA		0.26	0.33	
BAT43 IF=15mA			0.45	
Maximum Peak Reverse Current VR=25V	I_R		500	nA
Junction Capacitance VR=1V, f=1.0MHz	Cj	7(Typ.)		pF
Reverse Recovery Time (Note 1)	trr	5.0 (Typ.)		nS

Note: 1. Reverse Recovery Test Conditions: I_F=I_R=10mA, I_{RR}=1mA, R_L=100Ω.

Version: A07

RATINGS AND CHARACTERISTIC CURVES (BAT42 /BAT43)

Fig. 1 – Admissible Power Dissipation vs. Ambient Temperature

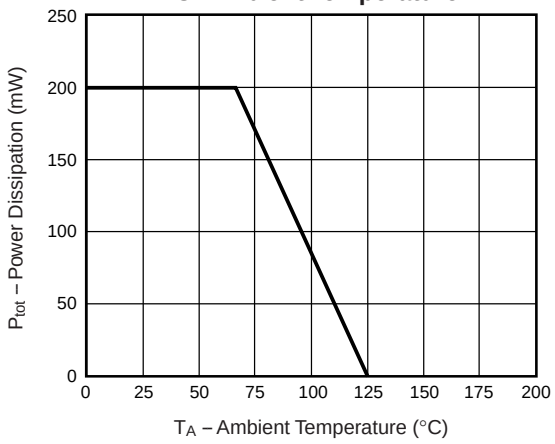


Fig. 2 – Typical Reverse Characteristics

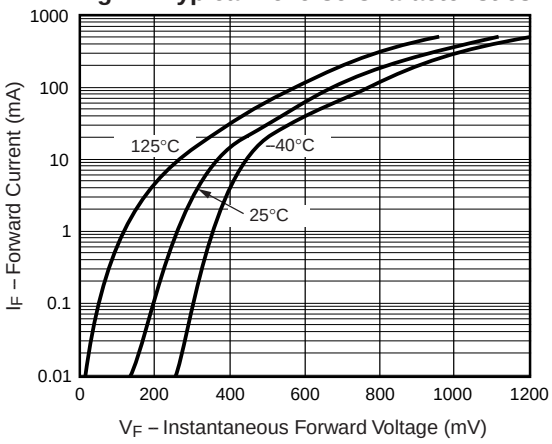


Fig. 3 – Typical Reverse Characteristics

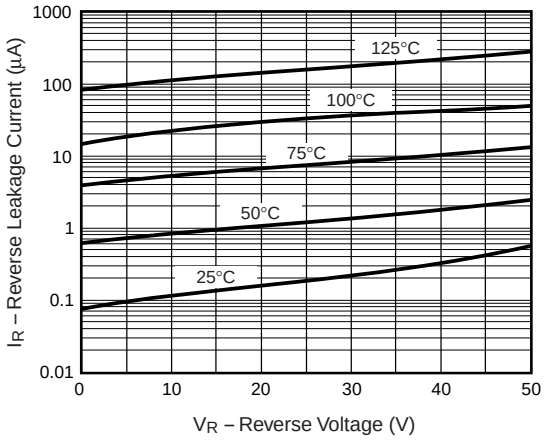


Fig. 4 – Typical Capacitance vs. Reverse Applied Voltage