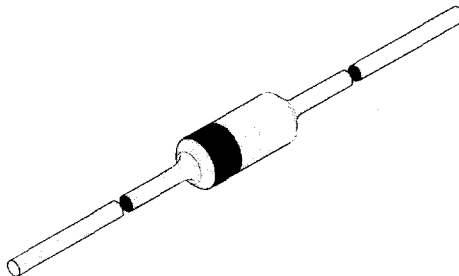


Schottky Barrier Diodes

Features

- Integrated protection ring against static discharge
- Low capacitance
- Low leakage current
- Low forward voltage drop
- Very low switching time



94 9367

Applications

General purpose and switching

Schottky barrier diode

HF-Detector

Protection circuit

Diode for low currents with a low supply voltage

Small battery charger

Power supplies

DC / DC converter for notebooks

Absolute Maximum Ratings

 $T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Value	Unit
Reverse voltage		BAT81S	V_R	40	V
		BAT82S	V_R	50	V
		BAT83S	V_R	60	V
Peak forward surge current	$t_p \leq 10\text{ms}$		I_{FSM}	500	mA
Repetitive peak forward current	$t_p \leq 1\text{s}$		I_{FRM}	150	mA
Forward current			I_F	30	mA
Junction temperature			T_j	125	$^\circ\text{C}$
Storage temperature range			T_{stg}	-65...+150	$^\circ\text{C}$

Maximum Thermal Resistance

 $T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	$l=4\text{mm}, T_L=\text{constant}$	R_{thJA}	320	K/W

Electrical Characteristics

 $T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=0.1\text{mA}$		V_F			330	mV
	$I_F=1\text{mA}$		V_F			410	mV
	$I_F=15\text{mA}$		V_F			1	V
Reverse current	$V_R=V_{Rmax}$		I_R			200	nA
Diode capacitance	$V_R=1\text{V}, f=1\text{MHz}$		C_D			1.6	pF



Characteristics ($T_j = 25^\circ\text{C}$ unless otherwise specified)

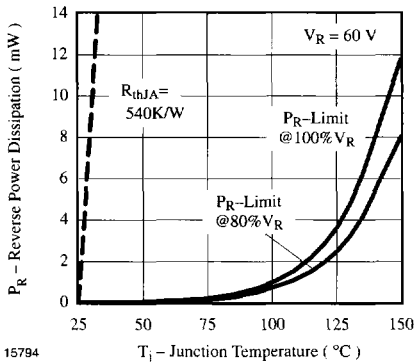


Figure 1. Max. Reverse Power Dissipation vs. Junction Temperature

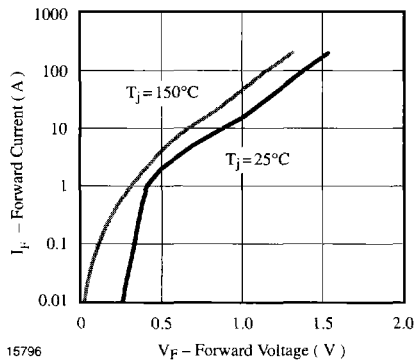


Figure 3. Forward Current vs. Forward Voltage

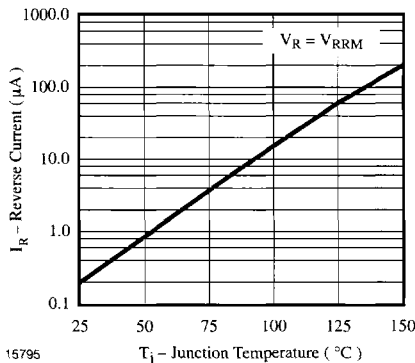


Figure 2. Reverse Current vs. Junction Temperature

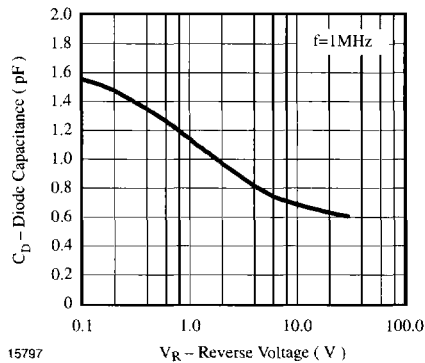


Figure 4. Diode Capacitance vs. Reverse Voltage



Dimensions in mm



technical drawings
according to DIN
specifications

94 9366

Standard Glass Case
54 A 2 DIN 41880
JEDEC DO 35
Weight max. 0.3 g

