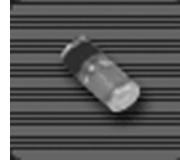


Features

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



Applications

HF-Detector
 Protection circuit
 Diode for low currents with a low supply voltage
 Small battery charger
 Power supplies
 DC / DC converter for notebooks

Mechanical Data

- ◆ Case: MiniMELF Glass Case (SOD-80)
- ◆ Weight: approx. 30 mg
- ◆ Cathode Band Color: Black

Absolute Maximum Ratings

($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Test Condition	Part	Symbol	Value	Unit
Reverse voltage		BAS81	V_R	40	V
		BAS82	V_R	50	V
		BAS83	V_R	60	V
Peak forward surge current	$t_p = 1 \text{ s}$		I_{FSM}	500	mA
Repetitive peak forward current			I_{FRM}	150	mA
Forward current			I_F	30	mA

Thermal Characteristics

($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Test Condition	Symbol	Value	Unit
Junction ambient	on PC board 50 mm X 50mm X 1.6mm	$R_{\theta JA}$	320	K/W
Junction temperature		T_J	125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-65 to +150	$^{\circ}\text{C}$

Electrical Characteristics

($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F=0.1\text{mA}$	V_F			330	mV
	$I_F=1\text{mA}$				410	mV
	$I_F=15\text{mA}$				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

Typical characteristics

($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

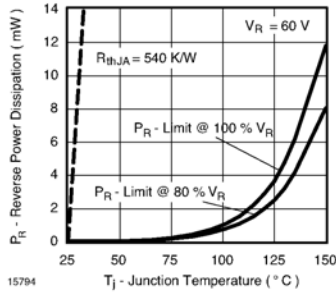


Fig. 1 Max. Reverse Power Dissipation vs. Junction Temperature

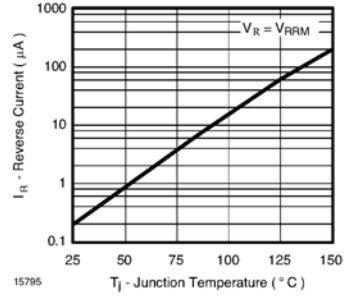


Fig. 2 Reverse Current vs. Junction Temperature

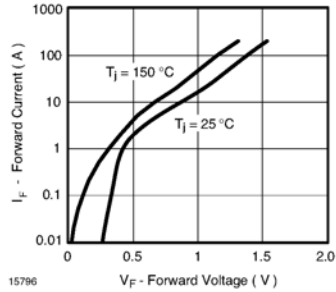


Fig. 3 Forward Current vs. Forward Voltage

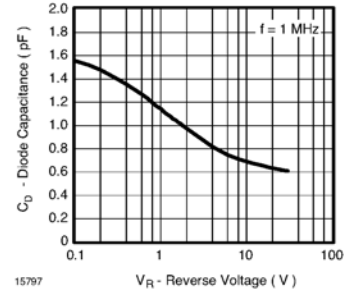


Fig. 4 Diode Capacitance vs. Reverse Voltage

Package Dimensions in mm (inches)

