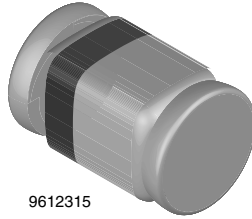


## Band Switching Diodes



### MECHANICAL DATA

**Case:** MicroMELF

**Weight:** approx. 12 mg

**Cathode band color:** black

**Packaging codes/options:**

TR3/10K per 13" reel (8 mm tape), 10K/box

TR/2.5K per 7" reel (8 mm tape), 12.5K/box

### FEATURES

- Silicon planar diode
- Saving space
- Hermetic sealed parts
- Fits onto SOD-323 footprints
- Electrical data identical with the devices BA682, BA683, BA982, BA983
- Low dynamic forward resistance
- Low diode capacitance
- High reverse impedance
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### APPLICATIONS

- Band switching in VHF-tuners

### PARTS TABLE

PART	TYPE DIFFERENTIATION	ORDERING CODE	REMARKS
BA1282	$V_R = 35\text{ V}$ , $r_f$ at $I_F 3\text{ mA} = \text{max. } 0.7\ \Omega$	BA1282-TR3 or BA1282-TR	Tape and reel
BA1283	$V_R = 35\text{ V}$ , $r_f$ at $I_F 3\text{ mA} = \text{max. } 1.2\ \Omega$	BA1283-TR3 or BA1283-TR	Tape and reel

### ABSOLUTE MAXIMUM RATINGS (1)

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE	UNIT
Reverse voltage		$V_R$	35	V
Forward continuous current		$I_F$	100	mA

**Note**

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

### THERMAL CHARACTERISTICS (1)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Junction to ambient air	Mounted on epoxy-glass hard tissue, fig. 1 35 $\mu\text{m}$ copper clad, 0.9 $\text{mm}^2$ copper area per electrode	$R_{\text{thJA}}$	500	K/W
Junction temperature		$T_j$	150	$^\circ\text{C}$
Storage temperature range		$T_{\text{stg}}$	- 55 to + 150	$^\circ\text{C}$

**Note**

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

### ELECTRICAL CHARACTERISTICS (1)

PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 100\text{ mA}$		$V_F$			1000	mV
Reverse current	$V_R = 20\text{ V}$		$I_R$			50	nA
Diode capacitance	$f = 100\text{ MHz}$ , $V_R = 1\text{ V}$		$C_{D1}$			1.5	pF
	$f = 100\text{ MHz}$ , $V_R = 3\text{ V}$	BA1282	$C_{D2}$			1.25	pF
Dynamic forward resistance	$f = 200\text{ MHz}$ , $I_F = 3\text{ mA}$	BA1282	$r_{f1}$			0.7	$\Omega$
		BA1283	$r_{f1}$			1.2	$\Omega$
	$f = 200\text{ MHz}$ , $I_F = 10\text{ mA}$	BA1282	$r_{f2}$			0.5	$\Omega$
		BA1283	$r_{f2}$			0.9	$\Omega$

**Note**

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

**TYPICAL CHARACTERISTICS**  $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

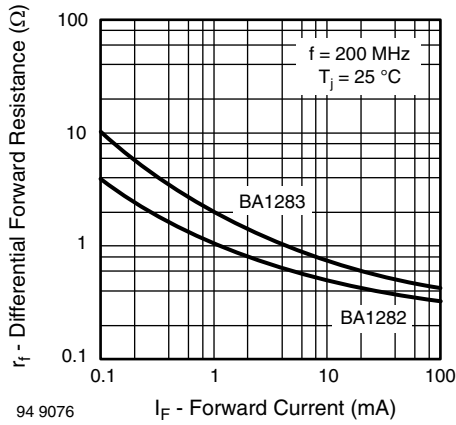


Fig. 1 - Dynamic Forward Resistance vs. Forward Current

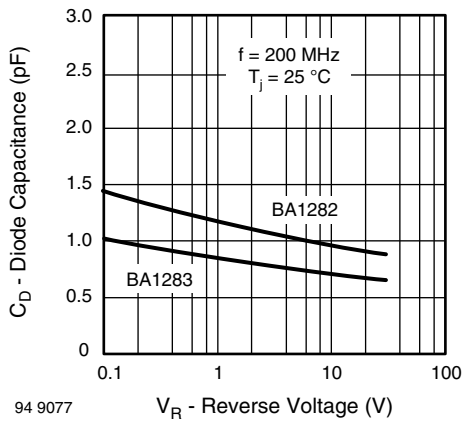


Fig. 2 - Diode Capacitance vs. Reverse Voltage

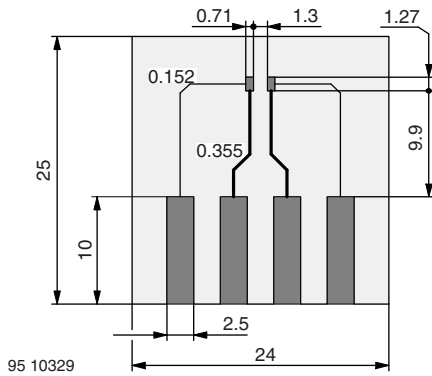
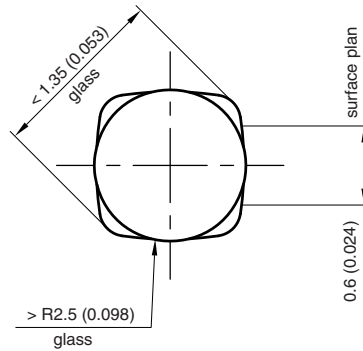
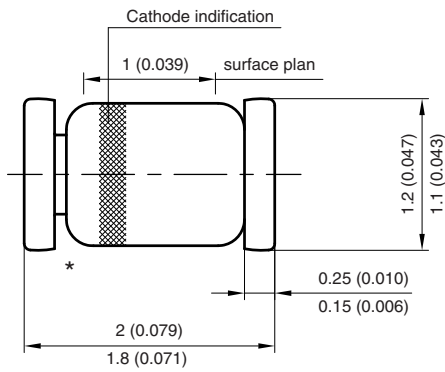


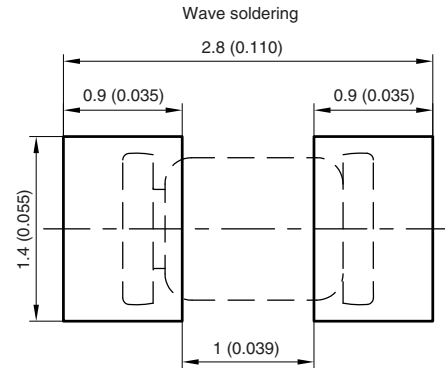
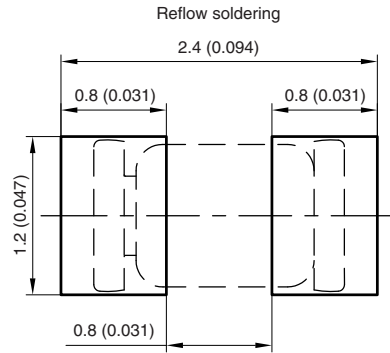
Fig. 3 - Board for  $R_{thJA}$  Definition (in mm)

**PACKAGE DIMENSIONS** in millimeters (inches): **MicromELF**



\* The gap between plug and glass can be either on cathode or anode side

Foot print recommendation:



Created - Date: 26.July.1996  
Rev. 13 - Date: 07.June.2006  
Document no.:6.560-5007.01-4  
96 12072



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