

Vishay Semiconductors

RF PIN Diodes - Single in MiniMELF SOD-80



FEATURES

- Wide frequency range 10 MHz to 1 GHz
- AEC-Q101 qualified
- Material categorization:
 For definitions of compliance please s

 <u>www.vishay.com/doc?99912</u>





APPLICATIONS

Current controlled HF resistance in adjustable attenuators

MECHANICAL DATA

Case: MiniMELF SOD-80
Weight: approx. 31 mg
Cathode band color: black
Packaging codes/options:

GS18/10K per 13" reel (8 mm tape), 10K/box GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

PARTS TABLE						
PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	INTERNAL CONSTRUCTION	REMARKS	
BA679	$z_r > 5 k\Omega$	BA679-GS18 or BA679-GS08	-	Single diode	Tape and reel	
BA679S	$z_r > 9 k\Omega$	BA679S-GS18 or BA679S-GS08	=	Single diode	Tape and reel	

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PART	TEST CONDITION	SYMBOL	VALUE	UNIT		
Reverse voltage		V_{R}	30	V		
Forward continuous current		I _F	50	mA		

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air	on PC board 50 mm x 50 mm x 1.6 mm	R _{thJA}	500	K/W	
Junction temperature		Tj	125	°C	
Storage temperature range		T _{stg}	- 55 to + 150	°C	

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 20 \text{ mA}$		V_{F}			1	V
Reverse current	$V_{R} = 30 \text{ V}$		I _R			0.05	μA
Diode capacitance	f = 100 MHz, V _R = 0 V		C _D			0.5	pF
Differential forward resistance	$f = 100 \text{ MHz}, I_F = 1.5 \text{ mA}$		r _f			50	Ω
Reverse impedance	f = 100 MHz, V _R = 0 V	BA679	z _r	5			kΩ
neverse impedance		BA679S	z _r	9			kΩ
Minority carrier lifetime	$I_F = 10 \text{ mA}, I_R = 10 \text{ mA}$		τ		4		μs

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TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

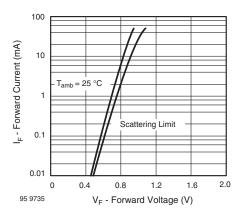


Fig. 1 - Forward Current vs. Forward Voltage

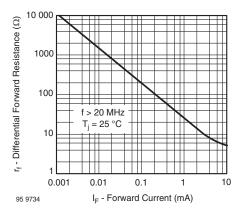


Fig. 2 - Differential Forward Resistance vs. Forward Current

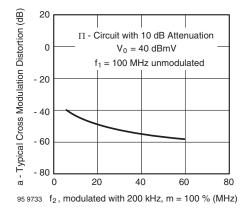
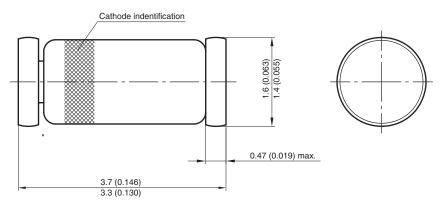


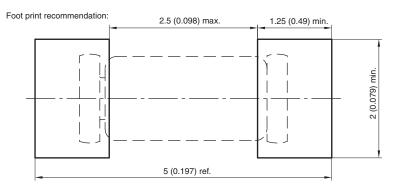
Fig. 3 - Typ. Cross Modulation Distortion vs. Frequency f₂

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PACKAGE DIMENSIONS in millimeters (inches): MiniMELF SOD-80



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



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BA679S-GS08 BA679-GS08 BA679-GS18 BA679S-GS18