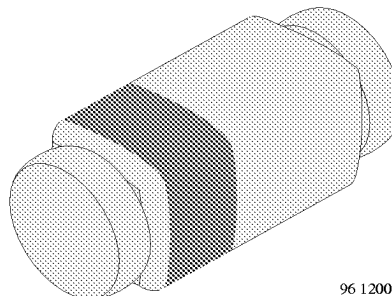




Silicon PIN Diodes

Features

- Wide frequency range 10 MHz to 1 GHz



96 12009

Applications

Current controlled HF resistance in adjustable attenuators

Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Reverse voltage			V_R	30	V
Forward current			I_F	50	mA
Junction temperature			T_j	125	$^\circ\text{C}$
Storage temperature range			T_{stg}	-55...+125	$^\circ\text{C}$

Maximum Thermal Resistance

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

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mmx50mmx1.6mm	R_{thJA}	500	K/W

Electrical Characteristics

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

Parameter	Test Conditions	Type	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			50	nA
Diode capacitance	$f=100\text{MHz}$, $V_R=0$		C_D			0.5	pF
Differential forward resistance	$f=100\text{MHz}$, $I_F=1.5\text{mA}$		r_f			50	Ω
Reverse impedance	$f=100\text{MHz}$, $V_R=0$	BA979	z_r	5			k Ω
		BA979S	z_r	9			k Ω
Minority carrier lifetime	$I_F=10\text{mA}$, $I_R=10\text{mA}$		τ		4		μs

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

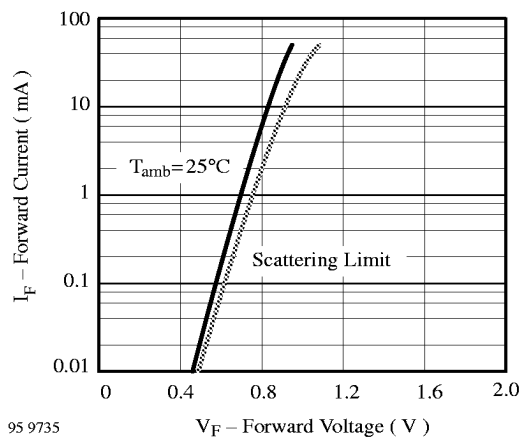


Figure 1. Forward Current vs. Forward Voltage

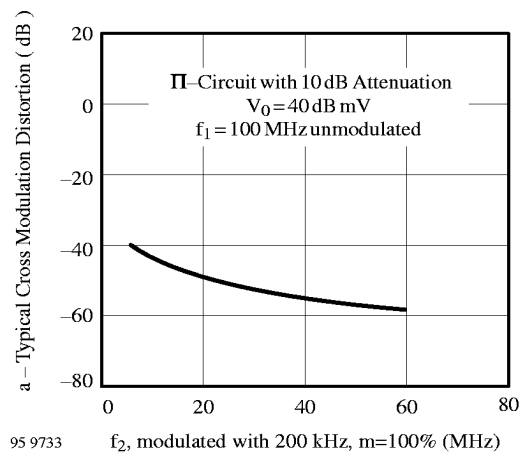


Figure 3. Typ. Cross Modulation Distortion vs. Frequency f_2

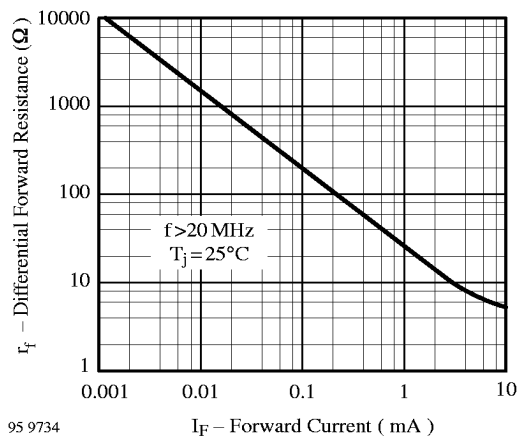
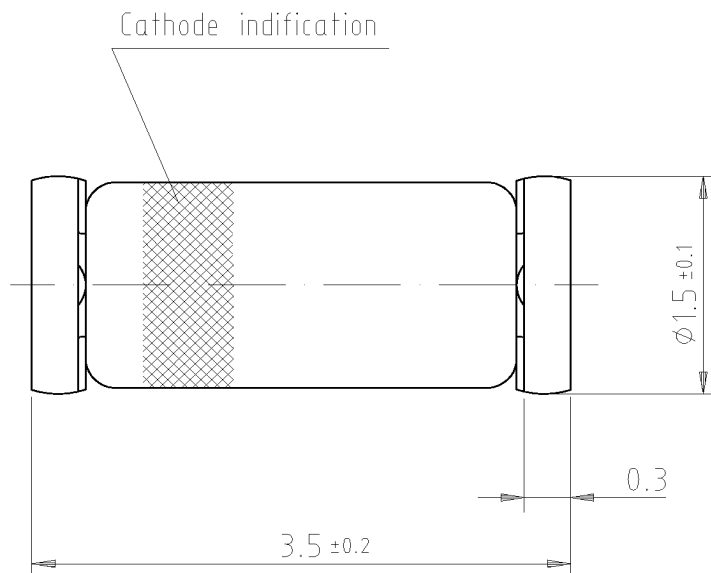
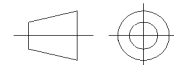
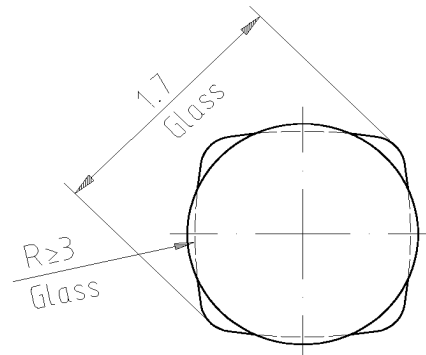


Figure 2. Differential Forward Resistance vs. Forward Current

Dimensions in mm


Glass case
Quadro MELF
similar to JEDEC 213 AA



technical drawings
according to DIN
specifications

96 12071