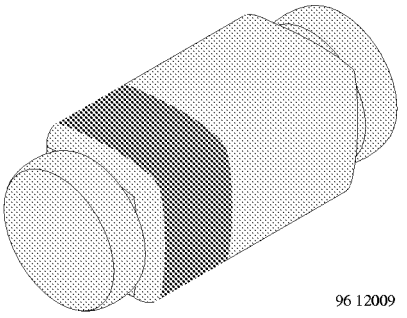
Silicon PIN Diodes

Features

- Wide frequency range 10 MHz to 1 GHz



Applications

Current controlled HF resistance in adjustable attenuators

Absolute Maximum Ratings

T_j = 25°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	°C
Storage temperature range			T_{stg}	–55...+125	°C

Maximum Thermal Resistance

T_j = 25°C

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

Electrical Characteristics

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=20mA		V_F			1	V
Reverse current	V_R=30 V		I_R			50	nA
Diode capacitance	f=100MHz, V_R=0		C_D			0.5	pF
Differential forward resistance	f=100MHz, I_F=1.5mA		r_f			50	Ω
Reverse impedance	f=100MHz, V_R=0	BA979	z_r	5			kΩ
		BA979S	z_r	9			kΩ
Minority carrier lifetime	I_F=10mA, I_R=10mA		τ		4		µs

Characteristics (T_j = 25°C unless otherwise specified)

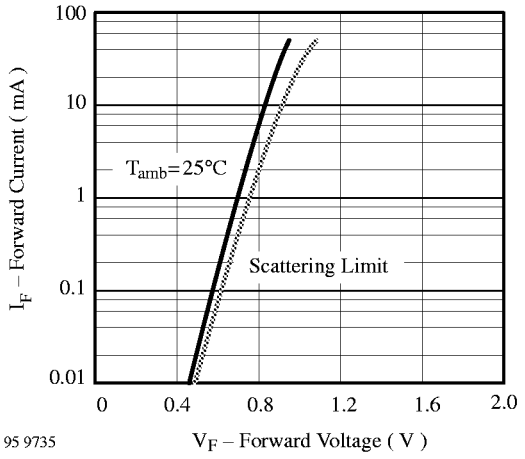


Figure 1. Forward Current vs. Forward Voltage

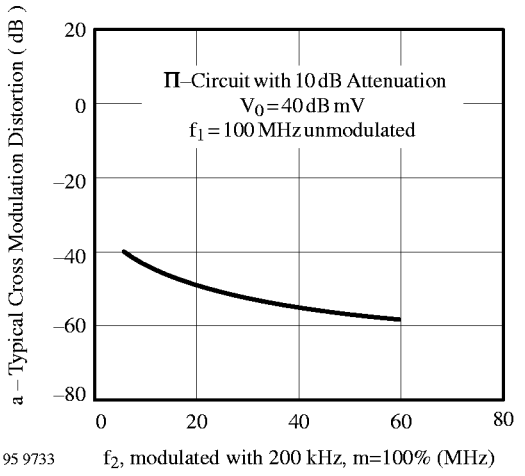


Figure 3. Typ. Cross Modulation Distortion vs. Frequency f_2

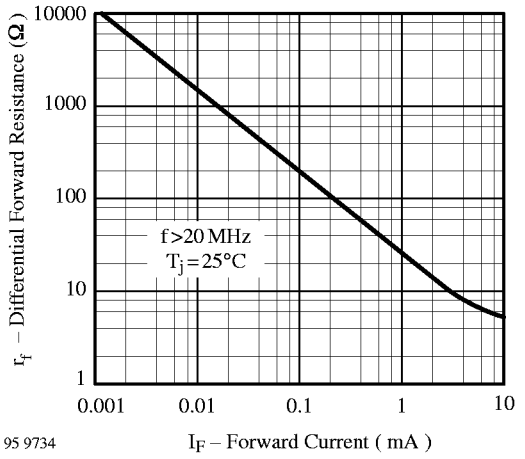
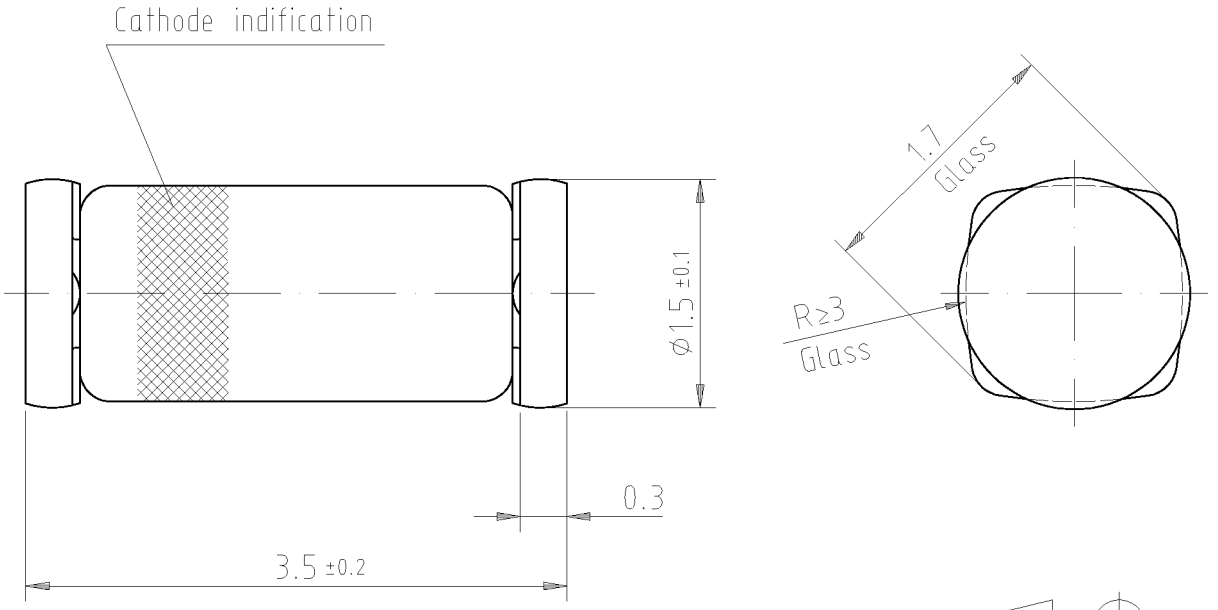


Figure 2. Differential Forward Resistance vs. Forward Current

Dimensions in mm



Glass case
Quadro MELF
similar to JEDEC 213 AA

96 12071

technical drawings
according to DIN
specifications