GENERAL PURPOSE PIN DIODE

FEATURES

- Low diode capacitance
- Low diode forward resistance
- Epoxy meets UL 94 V-0 flammability rating

SOD-523

MECHANICAL DATA

- Case: SOD-523 Molded plastic
- Terminals: Pure tin plated, lead free
- Polarity: Indicated by cathode band

Cathode

MAXIMUM RATINGS (T_A=25°Cunless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Inverse Voltage	V_{RRM}	60	V
Forward Continuous Current	I_F	50	mA
Power dissipation T_A=75°C	P_D	715	mW
Junction ambient On PC boar50mm×50mm×1.6mm	$R_{\theta JA}$	85	K/W
Storage Temperature Range	T_J,T_{STG}	– 55 to +150	°C

1) Valid provided that electrodes are kept at ambient temperature.

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Continuous reverse voltage	V_R	50			V	I_R=10μA
Forward voltage	V_{F1}			1.1	V	I_F =50mA
Reverse current	I_{R1}			100	nA	V_R =50V
Diode capacitance	C_{d1}			0.4	pF	V_R =0V,f=1MHz
Diode capacitance	C_{d2}			0.55	pF	V_R =1V,f=1MHz
Diode capacitance	C_{d3}			0.35	pF	V_R =5V,f=1MHz
Diode forward resistance	r_{D1}			9	Ω	I_F=0.5mA, f=100MHz
Diode forward resistance	r_{D2}			6.5	Ω	I_F=1mA, f=100MHz
Diode forward resistance	r_{D3}			2.5	Ω	I_F=10mA, f=100MHz

Typical Characteristics

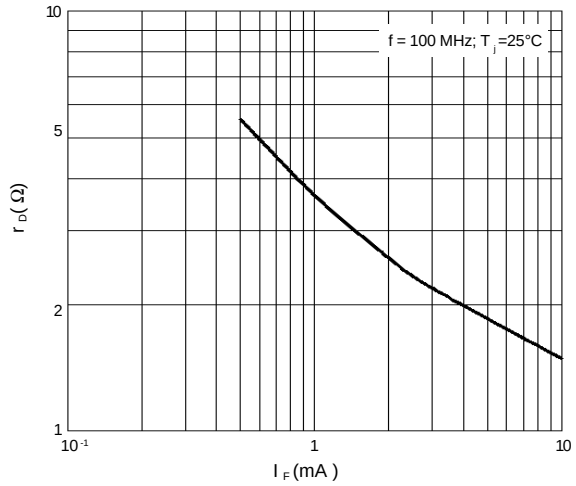

Fig.1 Forward resistance as a function of forward current; typical values.

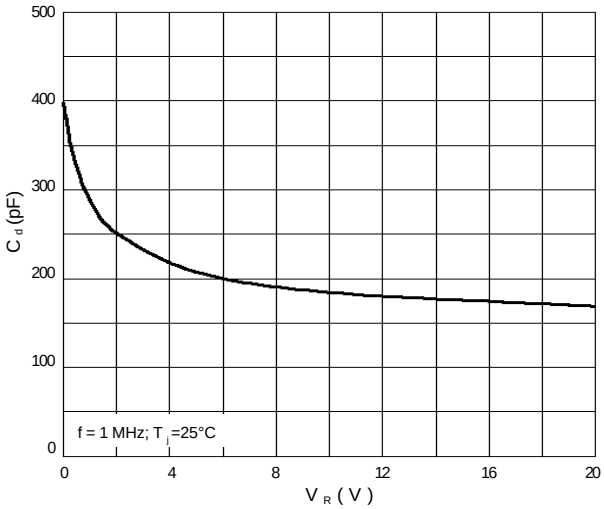

Fig.2 Diode capacitance as a function of reverse voltage; typical values.

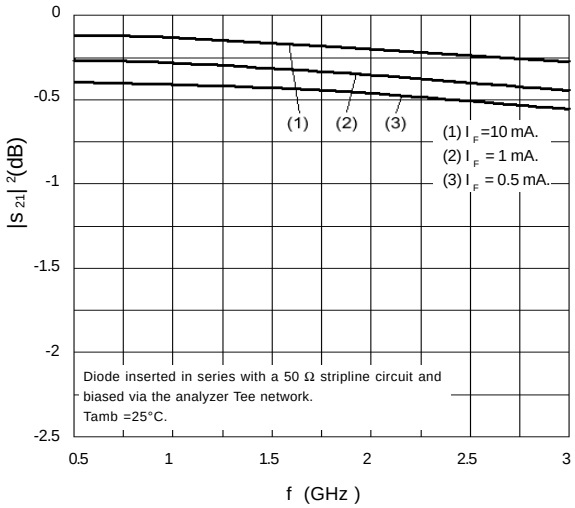

Fig.3 Insertion loss ($|s_{21}|^2$) of the diode in on-state as a function of frequency; typical values.

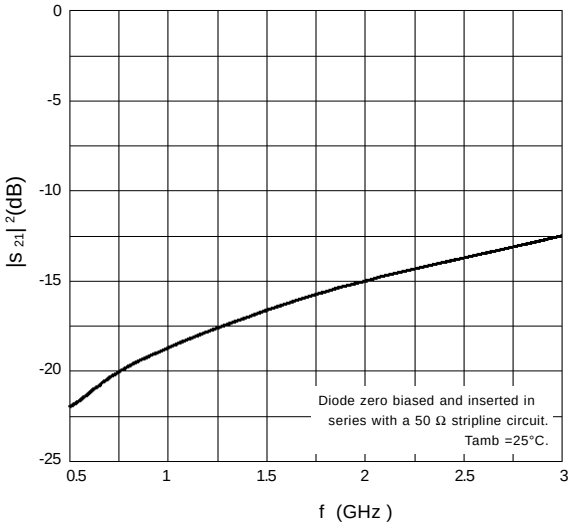

Fig.4 Isolation ($|s_{21}|^2$) of the diode in off-state as a function of frequency; typical values.