

PIN diode

RN739F / RN739D

●Applications

VHF / UHF band variable attenuators and AGC

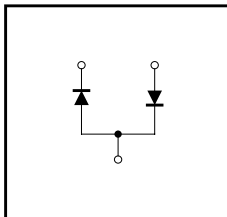
●Features

- 1) Multiple diodes in one small surface mount package.
(UMD3, SMD3)
- 2) Low high-frequency forward resistance (r_F) / low capacitance (C_T).
- 3) High reliability.

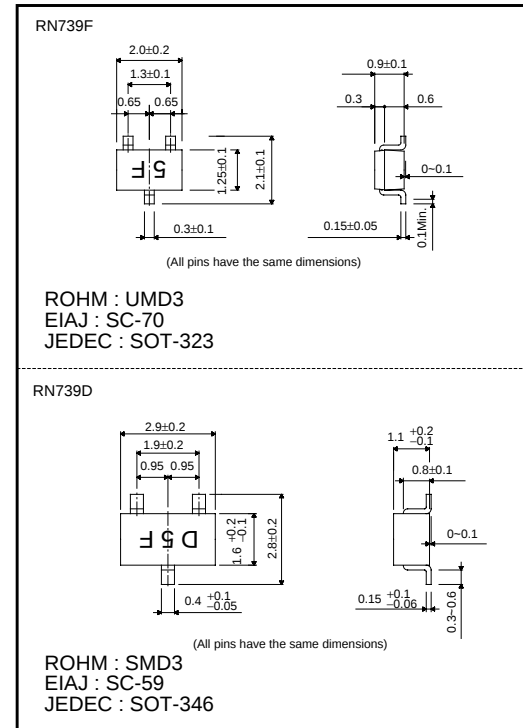
●Construction

Silicon diffusion junction

●Circuit



●External dimensions (Units : mm)



●Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
DC reverse voltage	V_R	50	V
DC forward current	I_F	50	mA
Power dissipation	P_d	100	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55~+125	$^\circ\text{C}$

●Electrical characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	—	—	1.0	V	$I_F=50\text{mA}$
Reverse current	I_R	—	—	100	nA	$V_R=50\text{V}$
Capacitance between terminals	C_T	—	—	0.4	pF	$V_R=35\text{V}$, $f=1\text{MHz}$
Forward operating resistance	r_F	—	—	7	Ω	$I_F=10\text{mA}$, $f=100\text{MHz}$

Diodes

●Electrical characteristic curves (Ta = 25°C)

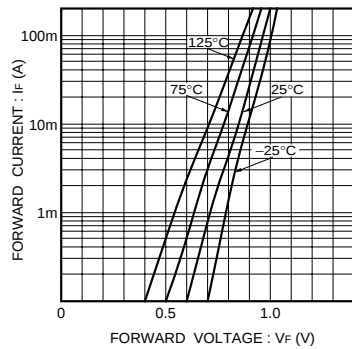


Fig.1 Forward characteristics

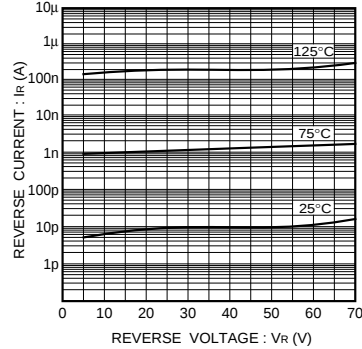


Fig.2 Reverse characteristics

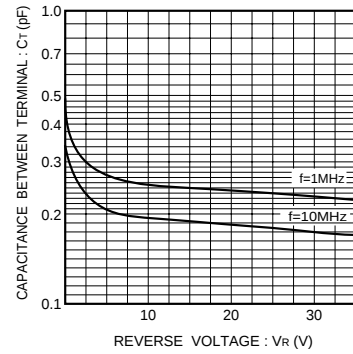


Fig.3 Capacitance between terminals characteristics 1

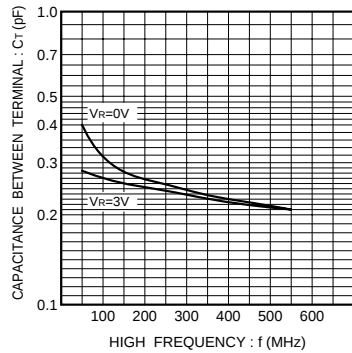


Fig.4 Capacitance between terminals characteristics 2

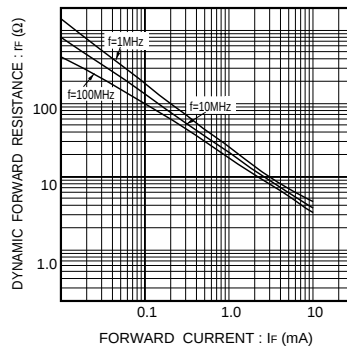


Fig.5 High frequency characteristics

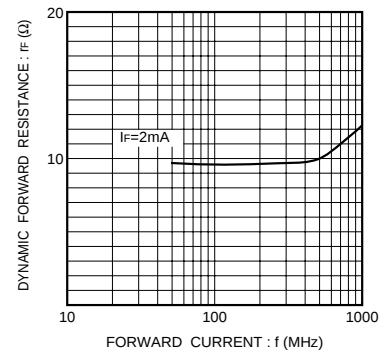


Fig.6 Forward operating resistance characteristics

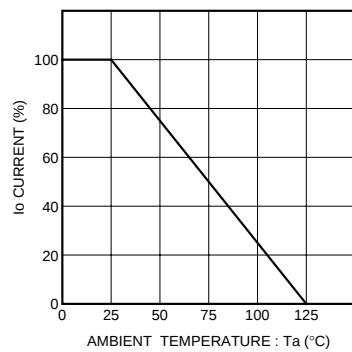


Fig.7 Derating curve
(mounting on glass epoxy PCBs)