

PIN diode

RN739F / RN739D

●Applications

VHF / UHF band variable attenuators and AGC

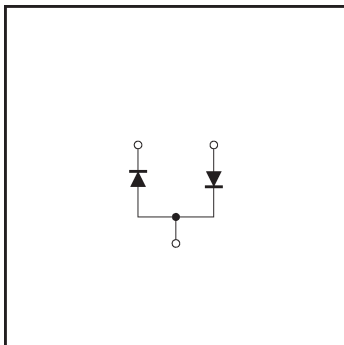
●Features

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

●Construction

Silicon diffusion junction

●Equivalent circuit



●Absolute maximum ratings (Ta = 25°C)

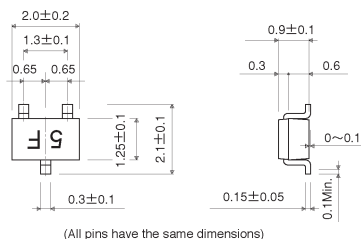
Parameter	Symbol	Limits	Unit
DC reverse voltage	V_R	50	V
DC forward current	I_F	50	mA
Power dissipation	P_d	100	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	-55~+125	°C

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	—	0.93	1.0	V	$I_F=50\text{mA}$
Reverse current	I_R	—	0.01	100	nA	$V_R=50\text{V}$
Capacitance between terminals	C_T	—	0.23	0.4	pF	$V_R=35\text{V}$, $f=1\text{MHz}$
Forward operating resistance	r_F	—	3.5	7	Ω	$I_F=10\text{mA}$, $f=100\text{MHz}$

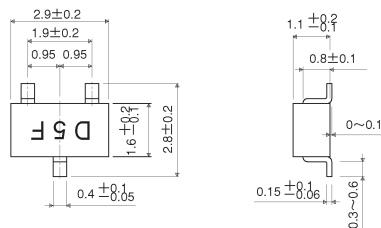
●External dimensions (Units: mm)

RN739F



ROHM : UMD3
EIAJ : SC - 70
JEDEC : SOT - 323

RN739D



ROHM : SMD3
EIAJ : SC - 59
JEDEC : SOT - 23 similar

●Electrical characteristic curves ($T_a = 25^\circ\text{C}$ unless specified otherwise)

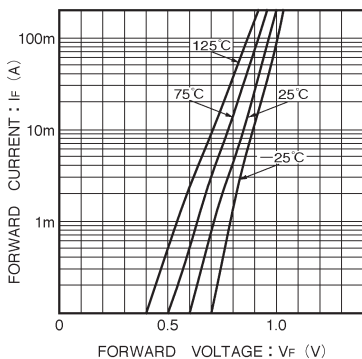


Fig. 1 Forward characteristics

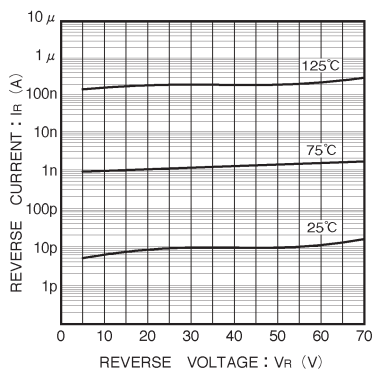


Fig. 2 Reverse characteristics

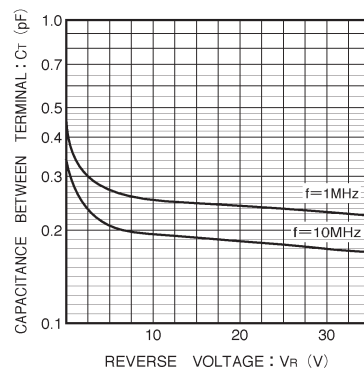


Fig. 3 Capacitance between terminals characteristics 1

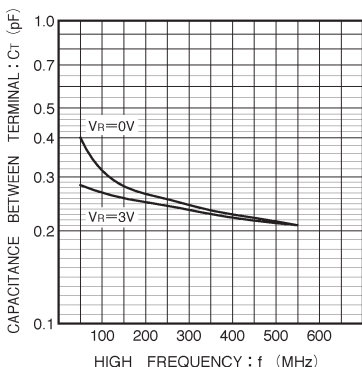


Fig. 4 Capacitance between terminals characteristics 2

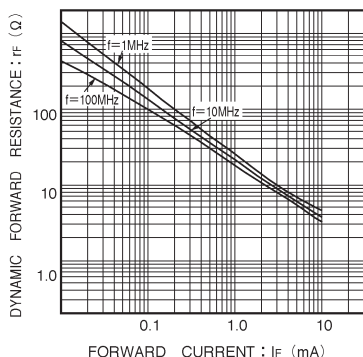


Fig. 5 High frequency characteristics

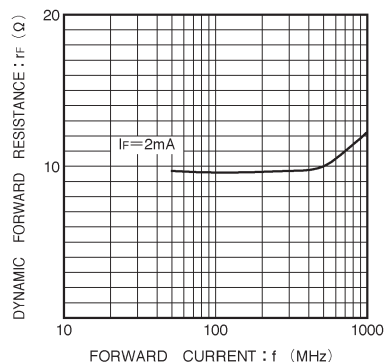
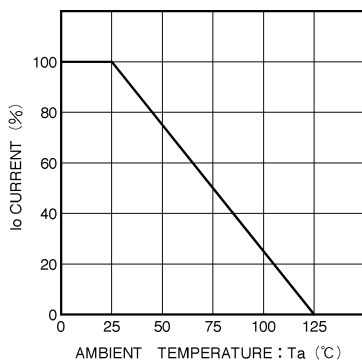


Fig. 6 Forward operating resistance characteristics

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