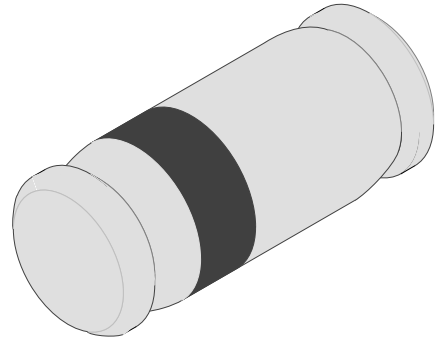


Features

- Electrical data identical with the devices 1N4148 and 1N4448 respectively

Applications

Extreme fast switches



Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage			V_{RRM}	100	V
Reverse voltage			V_R	75	V
Peak forward surge current	$t_p = 1\mu\text{s}$		I_{FSM}	2	A
Repetitive peak forward current			I_{FRM}	500	mA
Forward current			I_F	300	mA
Average forward current	$V_R = 0$		I_{FAV}	150	mA
Power dissipation			P_V	500	mW
Operating junction temperature			T_j	-65~175	$^\circ\text{C}$
Storage temperature range			T_{stg}	-65~175	$^\circ\text{C}$

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

Characteristics

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F =5mA	MM4448	V _F	0.62		0.72	V
	I _F =50mA	MM4148	V _F		0.86	1	V
	I _F =100mA	MM4448	V _F		0.93	1	V
Reverse current	V _R =20V		I _R			25	nA
	V _R =20V, T _j =150°C		I _R			50	μA
	V _R =75V		I _R			5	μA
Breakdown voltage	I _R =100μA, t _p /T=0.01, t _p =0.3ms		V _(BR)	100			V
Diode capacitance	V _R =0, f=1MHz, V _{HF} =50mV		C _D			4	pF
Rectification efficiency	V _{HF} =2V, f=100MHz		η _r	45			%
Reverse recovery time	I _F =I _R =10mA, i _R =1mA		t _{rr}			8	ns
	I _F =10mA, V _R =6V, i _R =0.1xI _R , R _L =100Ω		t _{rr}			4	ns

Typical Characteristics (T_j = 25°C unless otherwise specified)

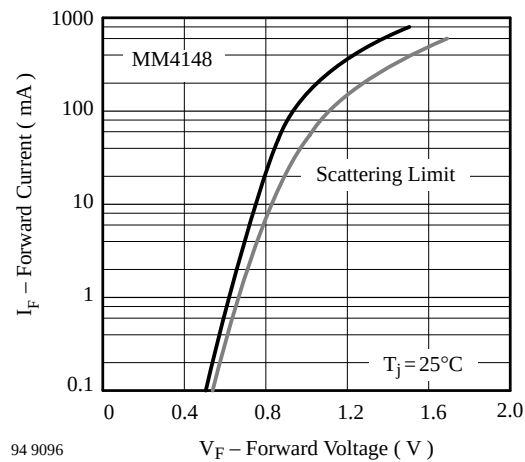


Figure 1. Forward Current vs. Forward Voltage

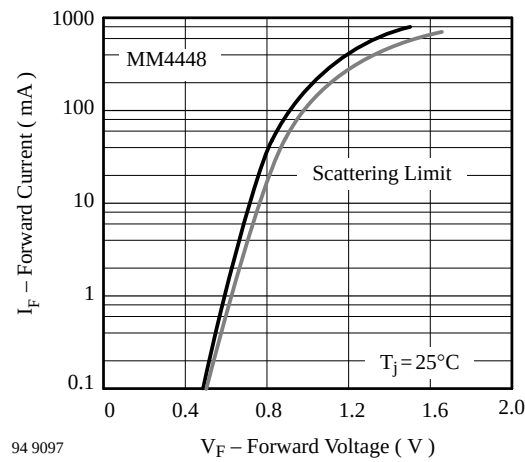


Figure 2. Forward Current vs. Forward Voltage

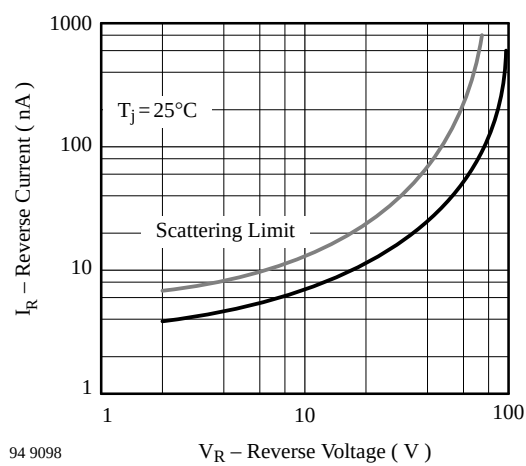


Figure 3. Reverse Current vs. Reverse Voltage

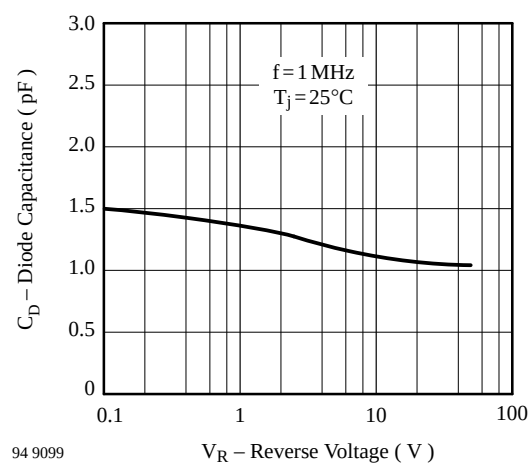


Figure 4. Diode Capacitance vs. Reverse Voltage

Dimensions in mm

