

MMBD4148 / SE / CC / CA

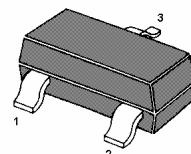
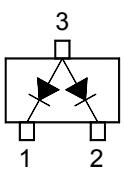
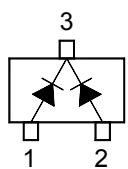
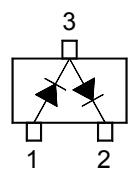
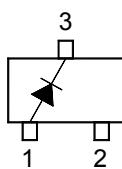
HIGH CONDUCTANCE ULTRA FAST DIODES

4148

4148SE

4148CC

4148CA



SOT-23 Plastic Package

MMBD4148SE Marking Code: **26**

MMBD4148CC Marking Code: **27**

MMBD4148CA Marking Code: **28**

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Maximum Repetitive Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Current	$I_{F(AV)}$	200	mA
DC Forward Current	I_{FM}	600	mA
Recurrent Peak Forward Current	I_{FRM}	700	mA
Non-repetitive Peak Forward Surge Current Pulse width = 1 s	I_{FSM}	1	A
Pulse width = 1 μs		2	A
Total Device Dissipation	P_{tot}	350	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Operating Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_S	-55 to +150	$^\circ\text{C}$

Characteristics at $T_J = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Breakdown Voltage at $I_R = 100 \mu\text{A}$ at $I_R = 5 \mu\text{A}$	V_R V_R	100 75	- -	V V
Forward Voltage at $I_F = 10 \text{ mA}$	V_F	-	1	V
Reverse Current at $V_R = 20 \text{ V}$ at $V_R = 20 \text{ V}, T_A = 150^\circ\text{C}$ at $V_R = 75 \text{ V}$	I_R	- - -	25 50 5	nA μA μA
Reverse Recovery Time at $I_F = 10 \text{ mA}, V_R = 6 \text{ V}, I_{RR} = 1 \text{ mA}, R_L = 100 \Omega$	t_{rr}	-	4	ns
Total Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	C_T	-	4	pF

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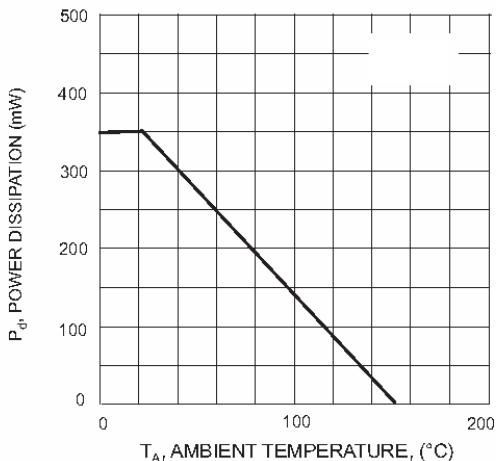


Fig. 1 Power Derating Curve

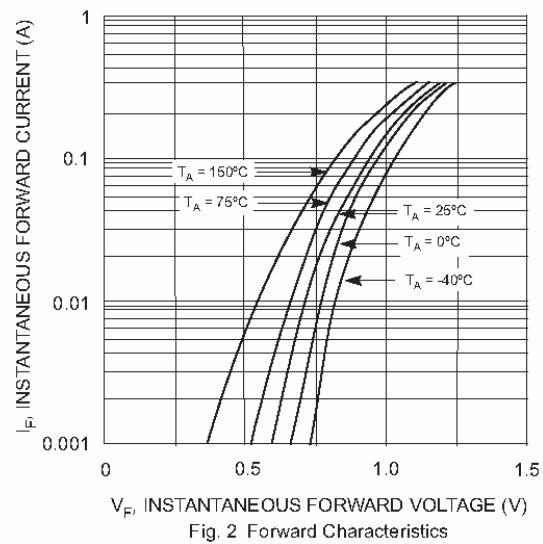


Fig. 2 Forward Characteristics

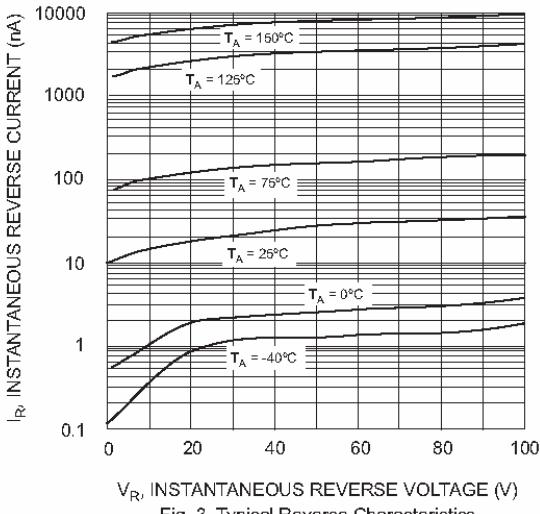


Fig. 3 Typical Reverse Characteristics

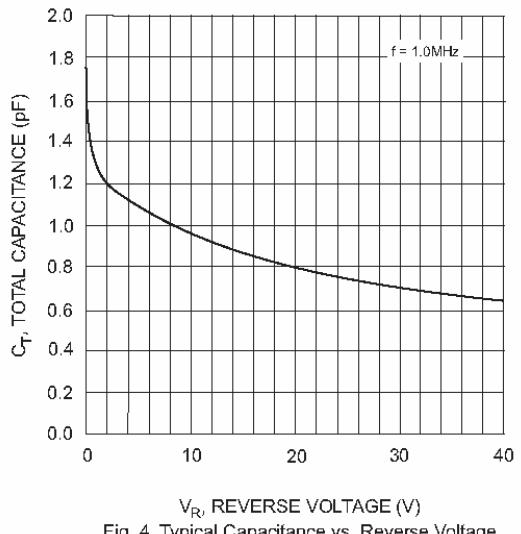


Fig. 4 Typical Capacitance vs. Reverse Voltage