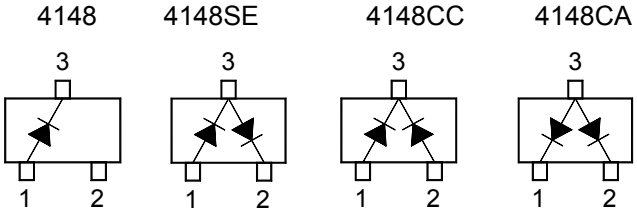
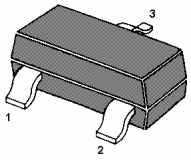
DAYA SEMICONDUCTOR

RoHS COMPLIANCE

MMBD4148 / SE / CC / CA

HIGH CONDUCTANCE ULTRA FAST DIODES





SOT-23 Plastic Package

MMBD4148SE

MMBD4148CC

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Absolute Maximum Ratings (T_a = 25 °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 Pulse width = 1 µs	I_{FSM}	 1 2	 A A
Total Device Dissipation	P_{tot}	350	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	357	°C/W
Operating Junction Temperature	T_J	150	°C
Storage Temperature Range	T_S	-55 to +150	°C

Characteristics at T_j = 25 °C

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

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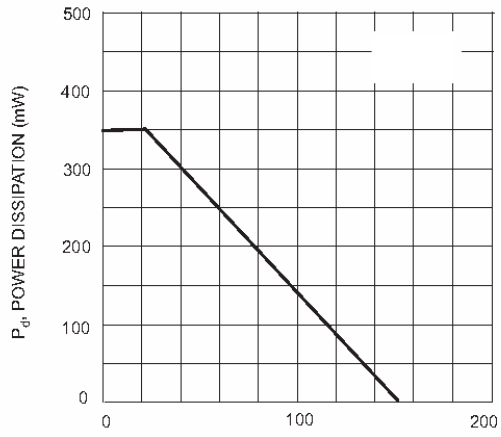

Fig. 1 Power Derating Curve

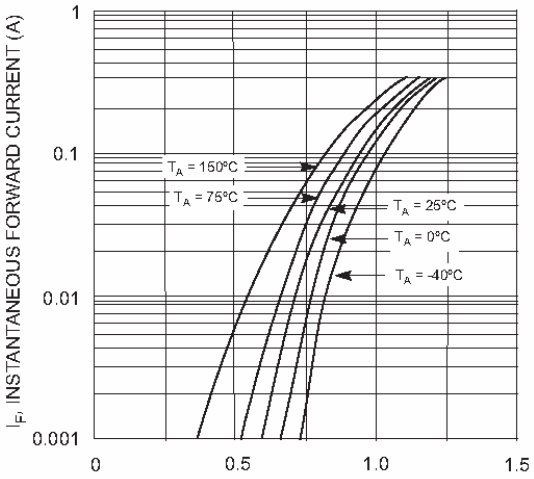

Fig. 2 Forward Characteristics

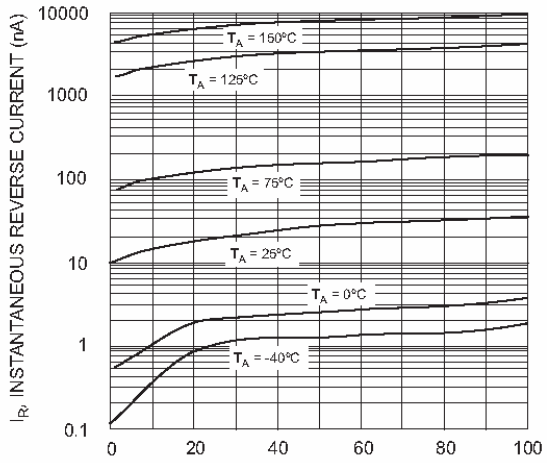

Fig. 3 Typical Reverse Characteristics

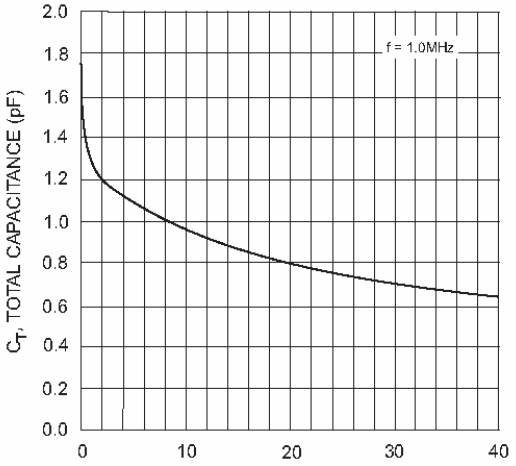

Fig. 4 Typical Capacitance vs. Reverse Voltage