Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 357°C/W Junction to Ambient

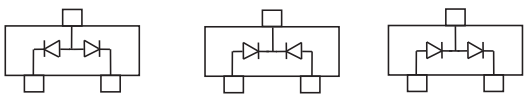
High Conductance Ultra Fast Diode 350mW

MCC Part Number	Device Marking
MMBD4148CA	D6
MMBD4148CC	D5
MMBD4148SE	D4

Parameter	Symbol	Value
DC Reverse Voltage	V_R	100V
Peak Repetitive Reverse Voltage	V_{RRM}	100V
Working Peak Reverse Voltage	V_{RWM}	100V
RMS Reverse Voltage	$V_{R(RMS)}$	71V
DC Forward Current	I_{FM}	600mA
Average Rectified Current	$I_{F(AV)}$	200mA
Repetitive Peak Forward Current	I_{FRM}	700mA
Peak Forward Surge Current(t=1s) (t=1μs)	I_{FSM}	1A 2A
Power Dissipation	P_D	350mW

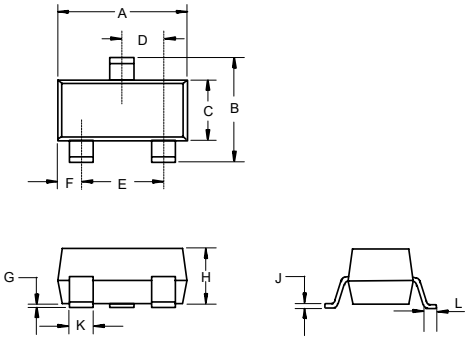
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Pin Configuration - Top View



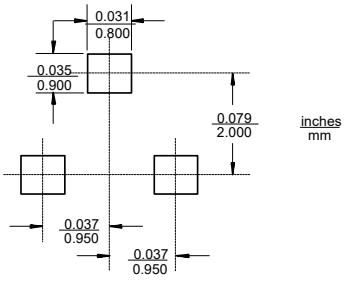
MMBD4148CA MMBD4148CC MMBD4148SE

SOT-23



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

Solder Pad Layout



Electrical Characteristics @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Forward Voltage	V_F	I_F=1mA			0.715	V
		I_F=10mA			0.855	V
		I_F=50mA			1	V
		I_F=150mA			1.25	V
Reverse Current	I_R	V_R=75V			1	μA
		V_R=20V			0.025	μA
		V_R=75V, T_J=150°C			50	μA
Junction Capacitance	C_J	V_R = 0V, f = 1MHz			2	pF
Reverse Recovery Time	t_{rr}	I_F=I_R=10mA, I_{rr}=0.1×I_R,R_L=100Ω			4	ns

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

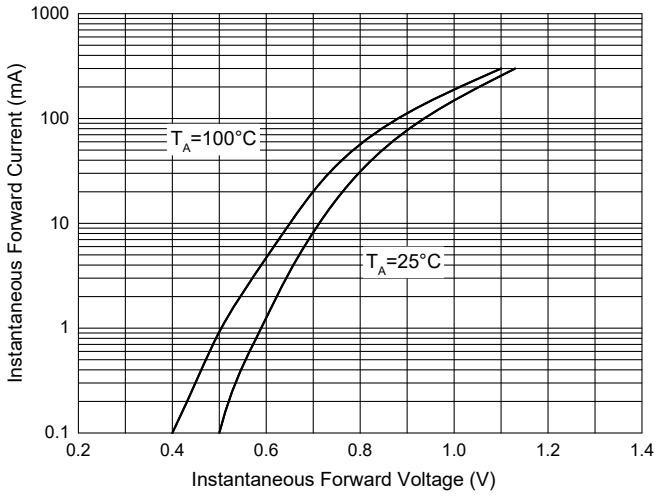


Fig. 2 - Typical Reverse Leakage Characteristics

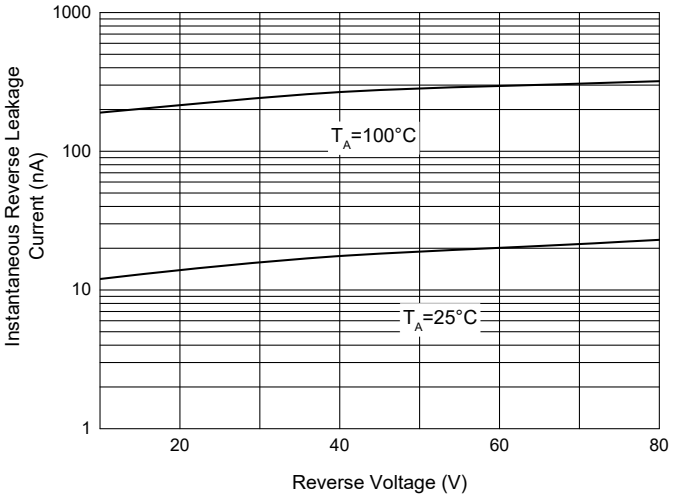
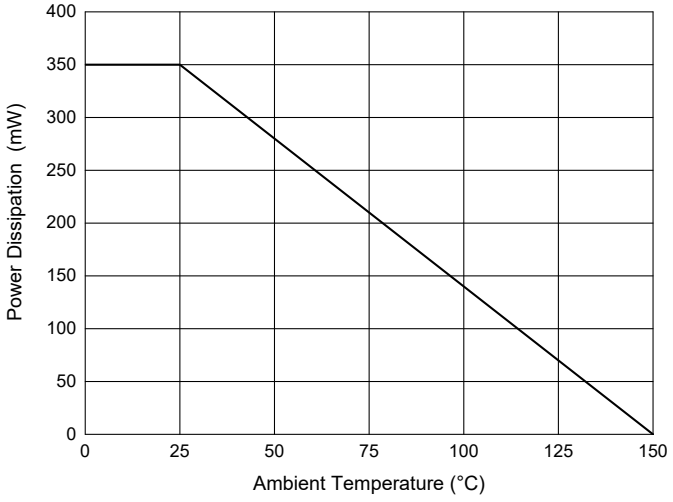


Fig. 3 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel
Part Number-13P	Tape&Reel: 10Kpcs/Reel

For packaging details, go to our website at https://www.mccsemi.com/pdf/productpackaging/SOT-23%20Package.pdf

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