



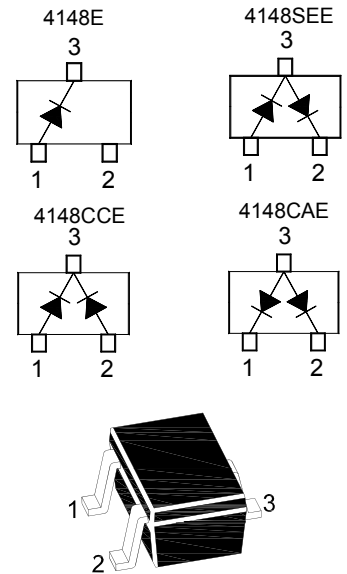
MMBD4148E Silicon Epitaxial Planar Switching Diode

MMBD4148E Marking Code: A6

MMBD4148SEE Marking Code: A7

MMBD4148CCE Marking Code: PH

MMBD4148CAE Marking Code: YX



SOT-523

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward 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	I_{FSM}	1 2	A
		at t = 1 s	
		at t = 10 μs	
Total Device Dissipation	P_{tot}	150	mW
Operating Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

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

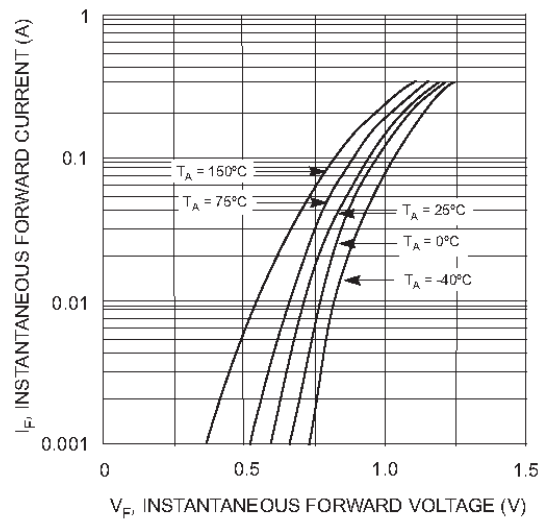
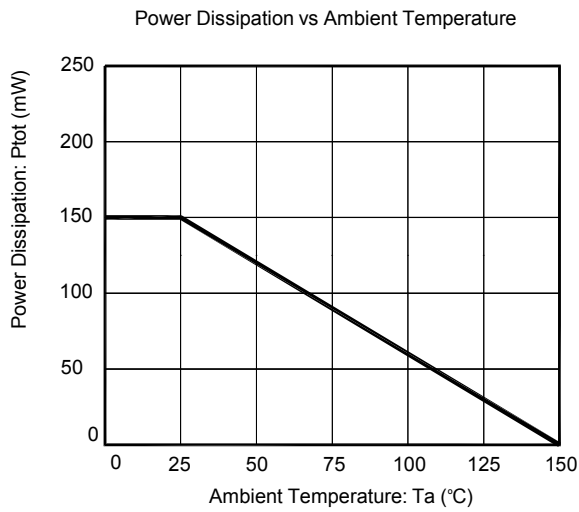


Fig. 2 Forward Characteristics

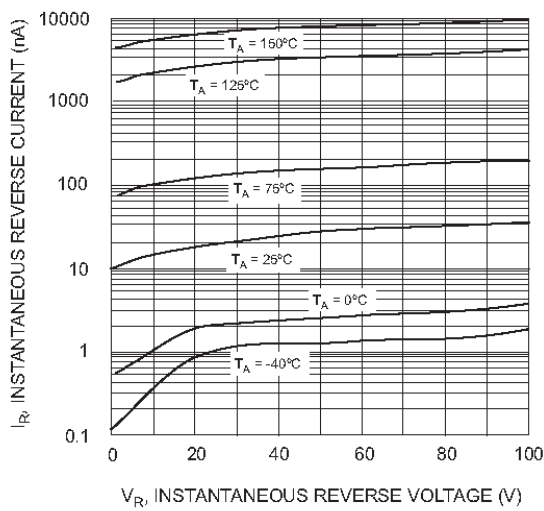


Fig. 3 Typical Reverse Characteristics

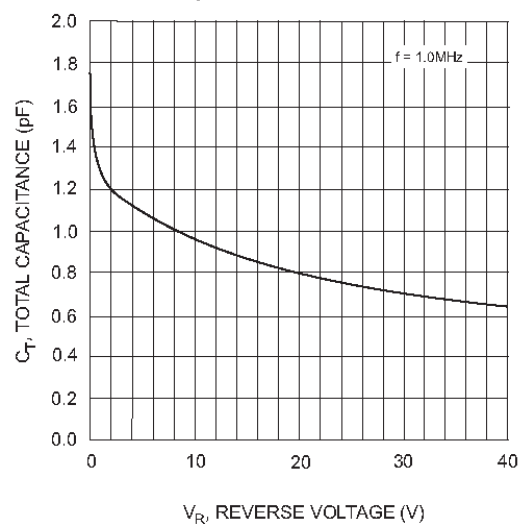
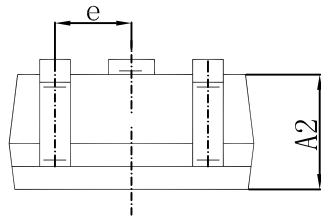
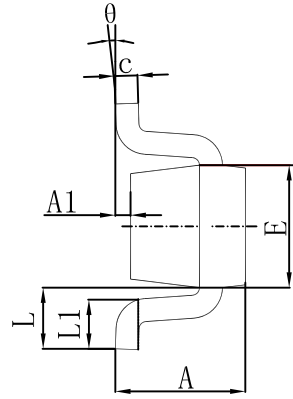
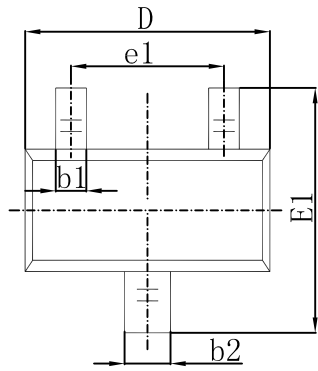


Fig. 4 Typical Capacitance vs. Reverse Voltage

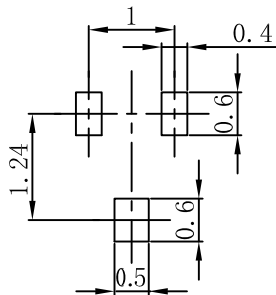


SOT-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

SOT-523 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.