

SOT-23 Formed SMD Package

CMBD4150

SILICON PLANAR EPITAXIAL HIGH SPEED DIODE

Marking

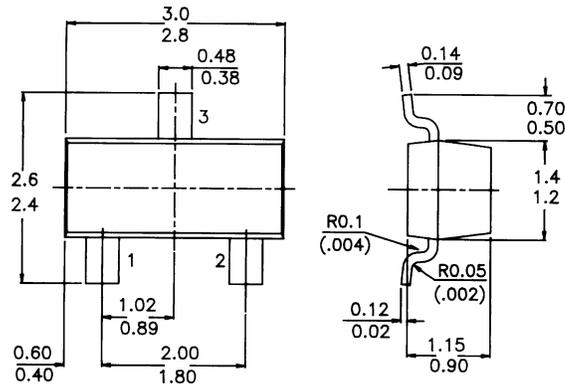
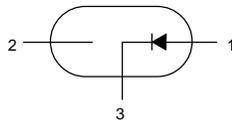
CMBD4150 = D18

PACKAGE OUTLINE DETAILS

ALL DIMENSIONS IN mm

Pin configuration

- 1 = ANODE
- 2 = NC
- 3 = CATHODE



ABSOLUTE MAXIMUM RATINGS

Continuous reverse voltage	V_R		50 V
Repetitive peak reverse voltage	V_{RRM}	max.	75 V
Repetitive peak forward current	I_{FRM}	max.	600 mA
Junction temperature	T_j	max.	150 °C
Peak forward surge current			
$T = 1 \mu\text{sec.}$	I_{FSM}	max.	4 A
$T = 1 \text{ sec.}$	I_{FSM}	max.	0.5 A
Reverse recovery time when switched from			
$I_F = 400 \text{ mA to } I_R = 400 \text{ mA}; R_L = 100 \Omega$			
measured at $I_R = 4 \text{ mA}$	T_{rr}	max.	6 ns

RATINGS (at $T_A = 25 \text{ °C}$, unless otherwise specified)

Storage Temperature	T_{stg}		-55 to +150 °C
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CMBD4150

THERMAL RESISTANCE

From junction to ambient $R_{th\ j-a}$ 500 K/W

CHARACTERISTICS (at $T_A = 25\ ^\circ\text{C}$, unless otherwise specified)

Continuous reverse voltage	V_R	max.	50 V
Repetitive peak reverse voltage	V_{RRM}	max.	75 V
Forward current (d.c.)	I_F	max.	300 mA
Repetitive peak forward current	I_{FRM}	max.	600 mA
Non-repetitive peak forward current			
$T = 1\ \mu\text{sec}$	I_{FSM}	max.	4 A
$T = 1\ \text{sec}$	I_{FSM}	max.	0.5 A
Diode capacitance			
$V_R = 0$; $f = 1\ \text{MHz}$	C_D	max.	2.5 pF
Forward voltage			
$I_F = 1\ \text{mA}$	V_F	min.	540 mV
		max.	620 mV
$I_F = 10\ \text{mA}$	V_F	min.	660 mV
		max.	740 mV
$I_F = 50\ \text{mA}$	V_F	min.	760 mV
		max.	860 mV
$I_F = 100\ \text{mA}$	V_F	min.	820 mV
		max.	920 mV
$I_F = 200\ \text{mA}$	V_F	min.	870 mV
		max.	1 V
Reverse breakdown voltage			
$I_R = 100\ \text{mA}$	V_{BR}	min.	75 V
Reverse voltage leakage current			
$V_R = 50\ \text{V}$	I_R	max.	100 nA
Reverse current			
$V_R = 50\ \text{V}$; $T_j = 150\ ^\circ\text{C}$	I_R	max.	100 μA
Forward recovery voltage			
when switched to $I_F = 10\ \text{mA}$; $t_p = 20\ \text{nsec}$.	V_{FR}	max.	1.75 V
Reverse recovery time			
$I_F = I_R = 10 - 200\ \text{mAdc}$, $R_L = 100\ \Omega$	t_{rr}	max.	4 ns
$I_F = I_R = 200 - 400\ \text{mAdc}$, $R_L = 100\ \Omega$	t_{rr}	max.	6 ns

Disclaimer

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