SOT-23 Formed SMD Package

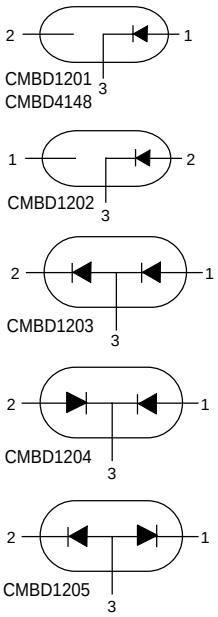
CMBD1201, CMBD1202, CMBD1203
CMBD1204, CMBD1205, CMBD4148

SILICON PLANAR EPITAXIAL HIGH SPEED DIODES

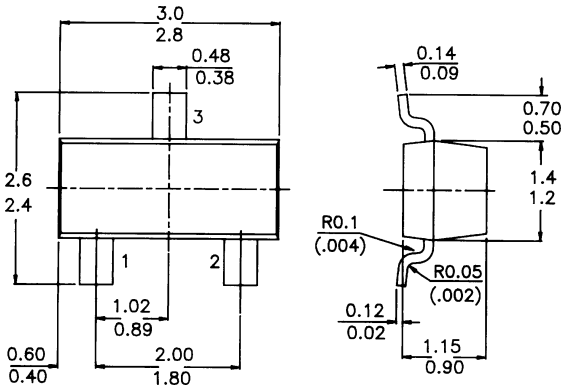
CMBD1201, 1202, CMBD4148 are all single diodes
CMBD1203 is a dual diode, in series
CMBD1204 is a dual diode, common cathode
CMBD1205 is a dual diode, common anode

Marking

CMBD1201 – 24
CMBD1202 – 25
CMBD1203 – 26
CMBD1204 – 27
CMBD1205 – 28
CMBD4148 – 5H



PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm



ABSOLUTE MAXIMUM RATINGS *(per diode)*

Continuous reverse voltage	V_R	*max.*	*75 V*
Repetitive peak reverse voltage	V_{RRM}	*max.*	*100 V*
Repetitive peak forward current	I_{FRM}	*max.*	*500 mA*
Forward current	I_F	*max.*	*215 mA*
Junction temperature	T_j	*max.*	*150 ° C*
Forward voltage at I_F = 10 mA	V_F	<	*0.855 V*

Reverse recovery time when switched from			
I_F = 10 mA to I_R = 10 mA; R_L = 100 Ω;			
measured at I_R = 1 mA	t_{rr}	<	4 ns

RATINGS *(per diode) (at T_A = 25°C unless otherwise specified)*

Limiting values			
Continuous reverse voltage	V_R	max.	75 V
Repetitive peak reverse voltage	V_{RRM}	max.	100 V
Repetitive peak forward current	I_{FRM}	max.	500 mA
Forward current	I_F	max.	215 mA
Non-repetitive peak forward current (per crystal)			
t = 1 μs	I_{FSM}	max.	4 A
t = 1 ms	I_{FSM}	max.	1.0 A
t = 1 s	I_{FSM}	max.	0.5 A
Storage temperature	Tstg	–55 to	+150 °C
Junction temperature	Tj	max.	150 °C

THERMAL RESISTANCE

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

CHARACTERISTICS *(per diode)*

T_j = 25 °C unless otherwise specified				
Forward voltage				
I_F = 10 mA		V_F	<	0.855 V
I_F = 200 mA		V_F	<	1.05 V
I_F = 10 mA	CMBD4148	V_F	<	1.0 V
Reverse currents				
V_R = 20 V		I_R	<	25 nA
V_R = 75 V		I_R	<	5 μA
V_R = 25 V; T_j = 150 °C		I_R	<	30 μA
Forward recovery voltage				
I_F = 10 mA; t_p = 20 ns		V_{fr}	<	1.75 V
Recovery charge				
I_F = 10 mA to V_R = 5V; R = 100 Ω		Q_s	<	45 pC
Diode capacitance				
V_R = 0; f = 1 MHz		C_d	<	2 pF
Reverse recovery time when switched from				
I_F = 10 mA to I_R = 10 mA; R_L = 100 Ω;				
measured at I_R = 1 mA		t_{rr}	<	4 ns

Customer Notes

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/ CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119
mail@cdil.com www.cdilsemi.com