

Small Signal Switching Chip Diode, Dual

Feature

Silicon Epitaxial Planar Diode.

Fast switching dual chip diode with anode to cathode.

This diode is also available in other configurations including single with type designation CDMMBD4148, a dual common anode with type designation CDBAV70, and a dual common cathode with type designation CDBAV99

Lead (Pd) - free component.

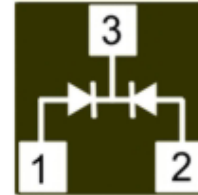
Figure



Case: SOT23 Plastic Case

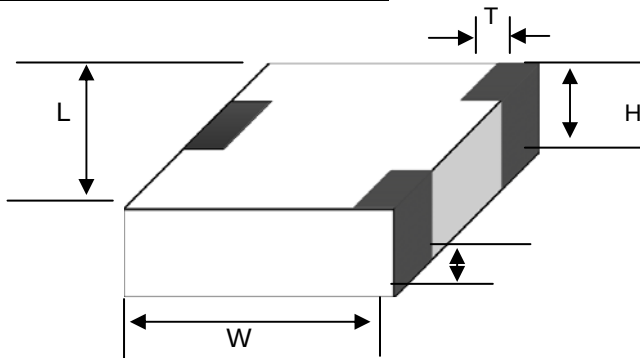
Weight: approx. 21mg

Value: CDBAV70



Mounting Pad Layout

DIMENSION:			
(mm)	CDBAW56	CDBAV70	CDBAV99
L	3.1 ± 0.2	3.1 ± 0.2	3.1 ± 0.2
W	2.6 ± 0.2	2.6 ± 0.2	2.6 ± 0.2
H	0.95 ± 0.2	0.95 ± 0.2	0.95 ± 0.2
T	0.75 ± 0.2	0.75 ± 0.2	0.75 ± 0.2
C	0.8 ± 0.1	0.8 ± 0.1	0.8 ± 0.1

Maximum Ratings & Electrical Characteristics $T_{amb} = 25^{\circ}\text{C}$, unless otherwise noted

Parameter	Symbol	Value	Unit
Device marking code		CDBAV70	
Non repetitive peak reverse voltage	V_{RM}	100	V
Reprtitive pead reverse voltage	$V_R = V_{RRM}$	70	V
Forward continuous current	I_F	200	mA
Non repetitive peak forward current	I_{FSM}	$t_p = 1\text{ us}$	2.0
		$t_p = 1\text{ ms}$	1.0
		$t_p = 1\text{ s}$	0.5
Average forward current	I_{FSM}	150 ¹⁾	mA
Power dissipation	P_{TOT}	300 ¹⁾	mW
Forward voltage	V_F	$I_F = 1\text{mA}$	715
		$I_F = 10\text{mA}$	855
		$I_F = 50\text{mA}$	1000
		$I_F = 150\text{mA}$	1250
Leakage current	I_R	$V_R = 70\text{V}$	2.5
		$V_R = 70\text{V}, T_J = 150^{\circ}\text{C}$	50
		$V_R = 25\text{V}, T_J = 150^{\circ}\text{C}$	30
Thermal resistance junction to ambient air	R_{thJA}	430 ¹⁾	K/W
Junction temperature	T_J	150	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	- 55 to + 150	$^{\circ}\text{C}$
Diode capacitance ($V_F = V_R = 0, f = 1\text{MHz}$)	C_{tot}	2	pF
Reverse Recovery time ($I_F = 10\text{mA}$ to $I_R = 1\text{mA}$, $V_R = 6\text{V}$, $R_L = 100\Omega$)	T_{rr}	6	ns

¹⁾ Valid provided that eletrodrs are kept at ambient temperature.

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Sunroc(Hk)Industrial Co.,Ltd.,

Typical Characteristics

(Tamb=25°C, unless otherwise specified)

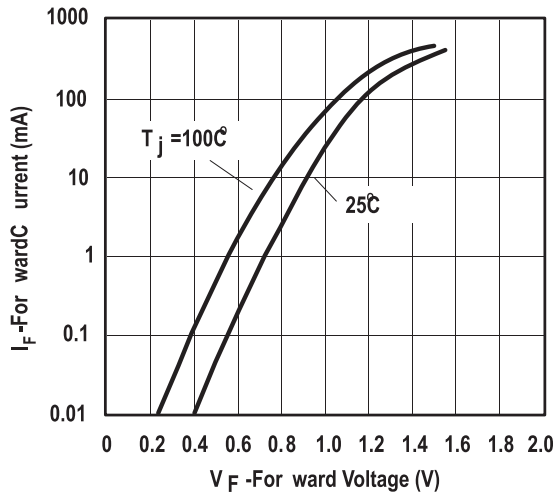


Figure1. Forward Current vs. Forward Voltage

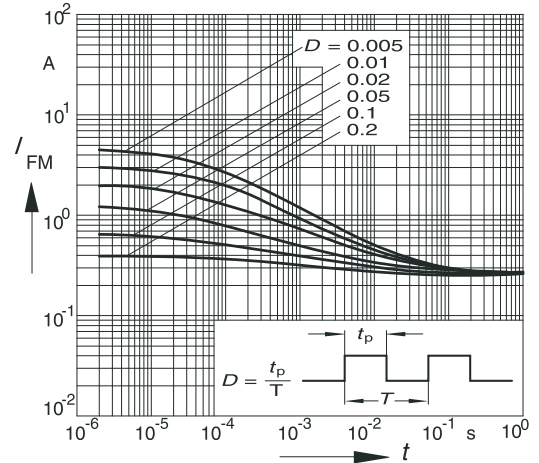
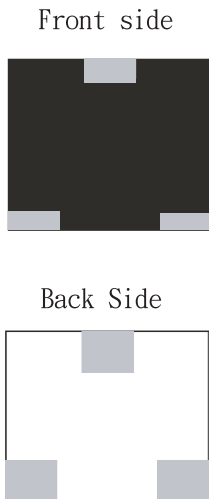
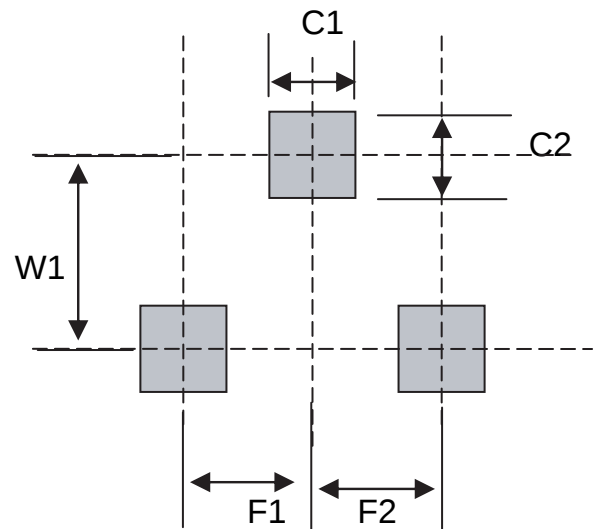


Figure2. Peak forward current $I_{FM} = f(t_p)$

Device outlook



Mounting Pad Layout



Mounting Pad Layout			
Typ.(mm)	CDBAW56	CDBAV70	CDBAV99
W1	2.0	2.0	2.0
C1	0.9	0.9	0.9
C2	0.9	0.9	0.9
F1	1.14	1.14	1.14
F2	1.14	1.14	1.14



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Suggested thermal profiles for soldering processes

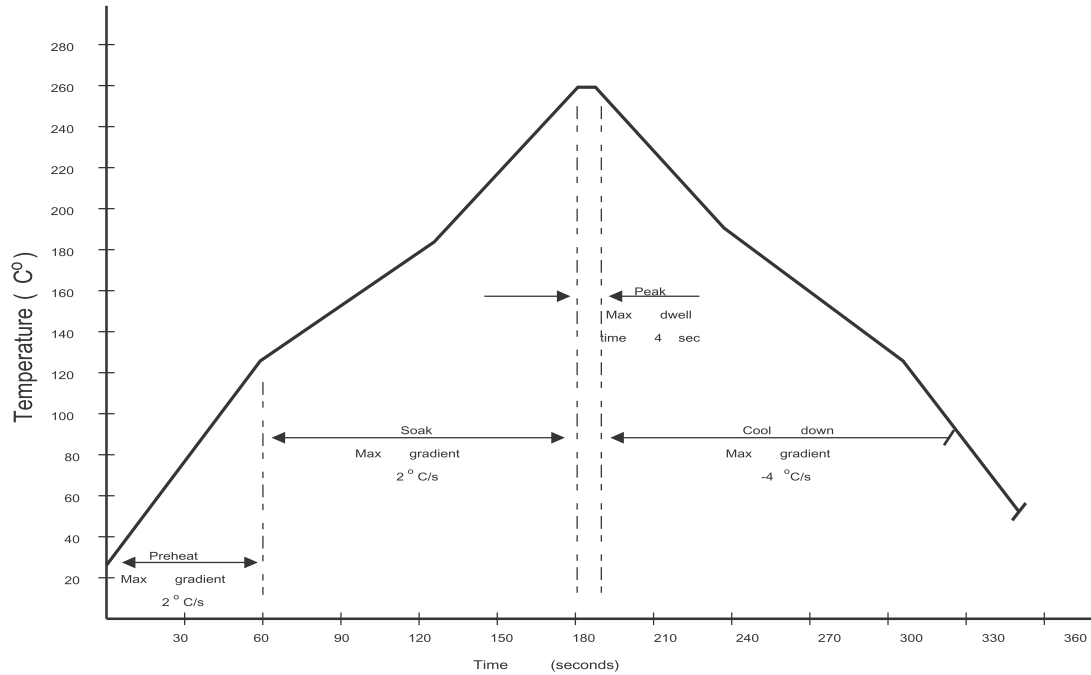


Fig.1 Typical Wave Soldering Thermal Profile

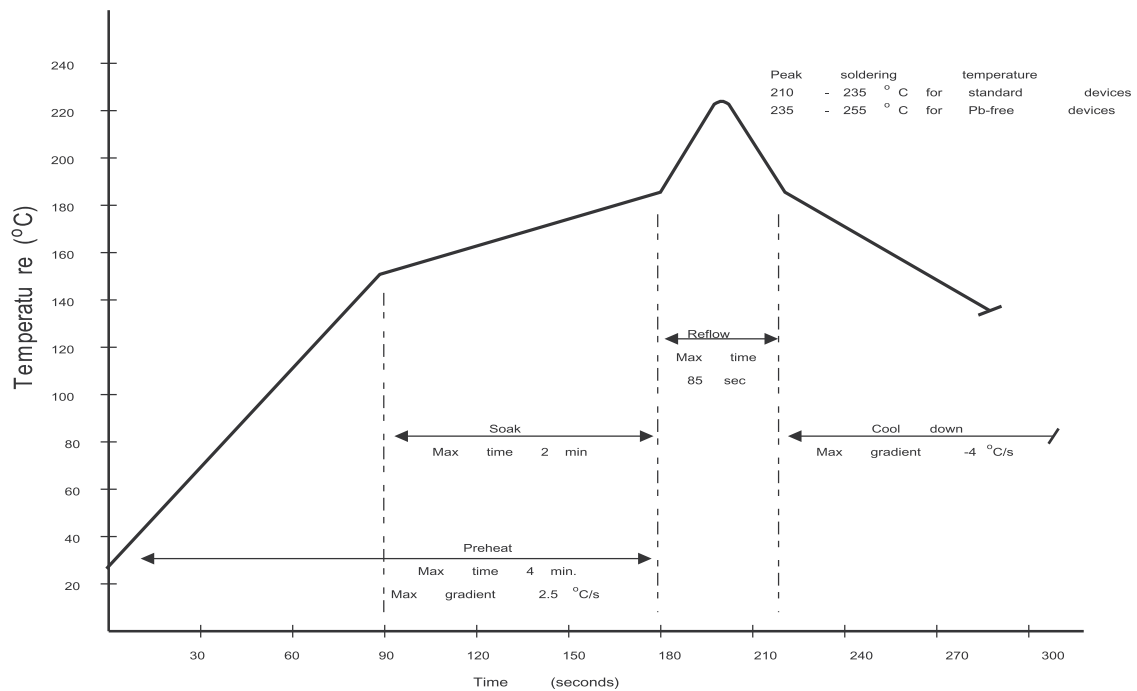


Fig.2 Typical IR Reflow Soldering Thermal Profile



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