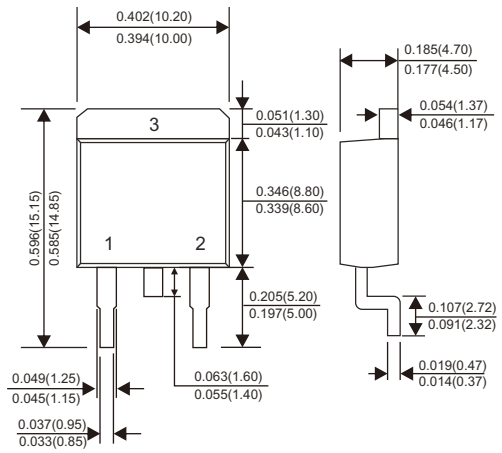
CDBD2SC21200-G

Reverse Voltage: 1200V
Forward Current: 2A
RoHS Device

Features

- Rated to 1200V at 2 Amps
- Short recovery time.
- High speed switching possible.
- High frequency operation.
- High temperature operation.
- Temperature independent switching behaviour.
- Positive temperature coefficient on V_F.

TO-263/D2PAK



Dimensions in inches and (millimeters)

Mechanical data

- Case: TO-263/D2PAK, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.

Circuit Diagram

Maximum Ratings (at T_A=25°C, unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Repetitive peak reverse voltage		V_{RRM}	1200	V
Surge peak reverse voltage		V_{RSM}	1200	V
DC blocking voltage		V_{DC}	1200	V
Continuous forward current	T_C = 155°C	I_F	2	A
Repetitive peak forward surge current	Tc = 25°C, tp = 10ms Half sine wave, D = 0.3	I_{FRM}	15	A
Non-repetitive peak forward surge current	Tc = 25°C, tp = 10ms Half sine wave	I_{FSM}	35	A
Power dissipation	T_C = 25°C	P_{TOT}	53.2	W
	T_C = 110°C		23	
Typical thermal resistance	Junction to case	$R_{\theta JC}$	2.82	°C/W
Operating junction temperature range		T_J	-55 ~ +175	°C
Storage temperature range		T_{STG}	-55 ~ +175	°C

Electrical Characteristics (at T_A=25°C, unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F = 2A, T_j = 25°C	V_F		1.62	1.7	V
	I_F = 2A, T_j = 175°C			2.8	3	
Reverse current	V_R = 1200V, T_j = 25°C	I_R		20	100	μA
	V_R = 1200V, T_j = 175°C			30	200	
Total capacitive charge	V_R = 800V, T_j = 150°C $Q_C = \int_0^{V_R} C(V)\,dv$	Q_C		12		nC
Total capacitance	V_R = 0V, T_j = 25°C, f = 1MHz	C		136	150	pF
	V_R = 400V, T_j = 25°C, f = 1MHz			12	13	
	V_R = 800V, T_j = 25°C, f = 1MHz			11	12	

Rating and Characteristics Curves (CDBD2SC21200-G)

Fig.1 - Forward Characteristics

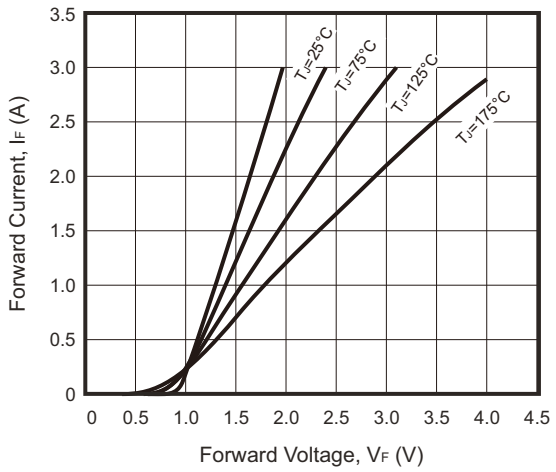


Fig.2 - Reverse Characteristics

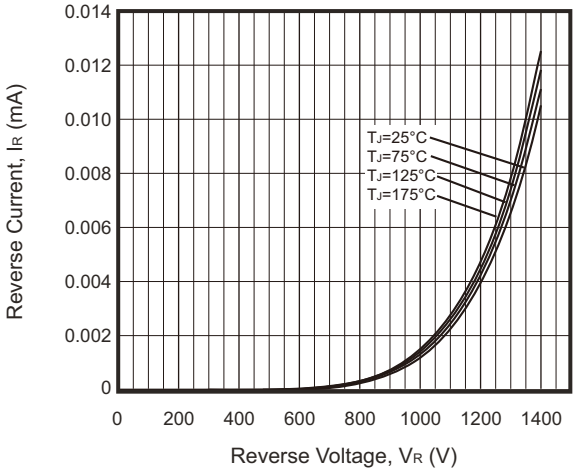


Fig.3 - Current Derating

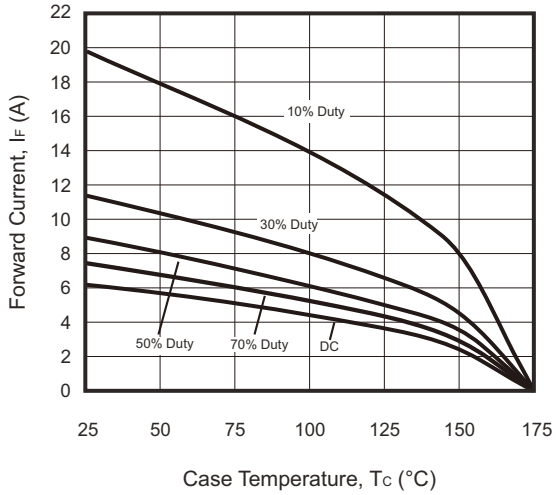
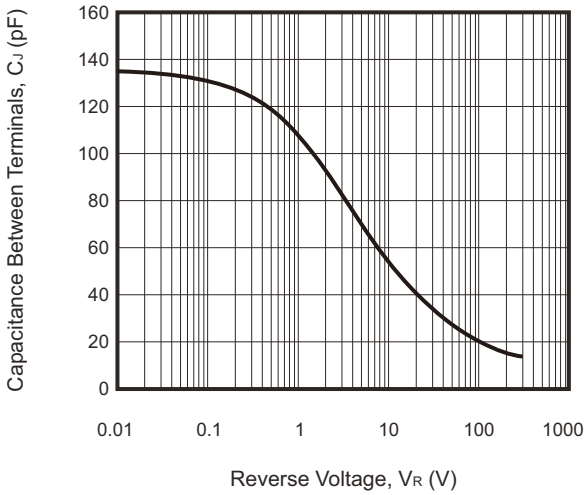


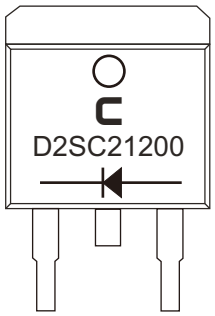
Fig.4 - Capacitance VS. Reverse Voltage



Company reserves the right to improve product design , functions and reliability without notice. REV:A

Marking Code

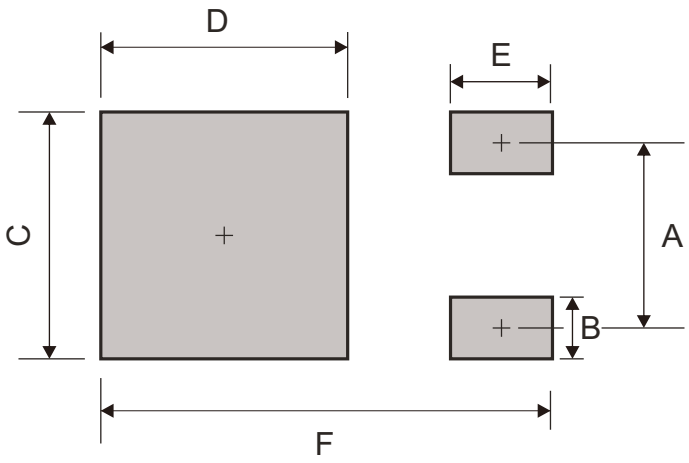
Part Number	Marking Code
CDBD2SC21200-G	D2SC21200



⊂ = Comchip Logo

Suggested PAD Layout

SIZE	TO-263 / D2PAK	
	(mm)	(inch)
A	5.08	0.200
B	1.10	0.043
C	10.80	0.425
D	8.30	0.327
E	3.50	0.138
F	16.90	0.665



Standard Packaging

Case Type	TUBE PACK	
	TUBE (pcs)	BOX (pcs)
TO-263/D2PAK	50	1,000