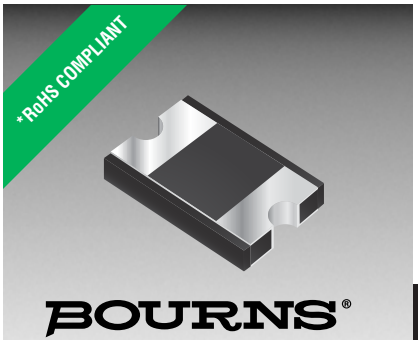


Features

- RoHS compliant*
- Low profile
- Low power loss, high efficiency
- UL 94V-0 classification

Applications

- Switch Mode Power Supplies
- Portable equipment batteries
- High frequency rectification
- DC/DC Converters
- Telecommunications

CD214C-FS3x Series Fast Response Rectifier Chip Diode

General Information

Portable communications, computing and video equipment manufacturers are challenging the semiconductor industry to develop increasingly smaller electronic components.

Bourns offers Glass Passivated Rectifiers for rectification applications in a compact chip package compatible with DO-214AB (SMC) size format. The Glass Passivated Rectifier Diodes offer a forward current of 3 A with a choice of repetitive peak reverse voltage of 200 V up to 600 V.



Absolute Maximum Ratings (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	CD214C-			Unit
		FS3D	FS3G	FS3J	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum Average Forward Current	$I_{F(AV)}$	3			A
Maximum Peak Forward Surge Current (8.3 ms Single Half Sine-Wave)	I_{FSM}	100			A
Operating Junction Temperature Range	T_{OPR}	-65 to +175			°C
Storage Temperature Range	T_{STG}	-65 to +175			°C

Electrical Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter		Symbol	Condition or Model		Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (NOTE 1)		V_F	I_F = 3 A	CD214C-FS3D		0.93	0.95	V
				CD214C-FS3G		1.2	1.25	
				CD214C-FS3J		1.4	1.7	
DC Reverse Current		I_R	V_R = V_{RRM}			0.2	5	μA
Reverse Recovery Time	I_F= 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	T_{rr}				35		nS
Typical Junction Capacitance		C_J	V_R = 4 V, f = 1.0 MHz			19		pF
Typical Thermal Resistance (NOTE 2)	Junction to Ambient	$R_{\theta JA}$				60		°C/W
	Junction to Lead	$R_{\theta JL}$				10		

NOTES:
(1) Pulse width 300 microsecond, 1 % duty cycle.
(2) Mounted on PCB with 5.0 x 5.0 mm (0.2 x 0.2 inch) copper pad areas.

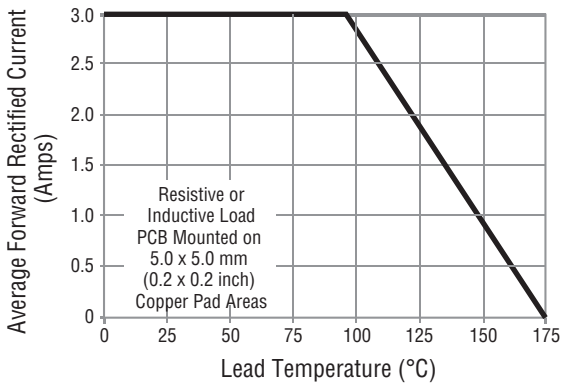
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
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Users should verify actual device performance in their specific applications.
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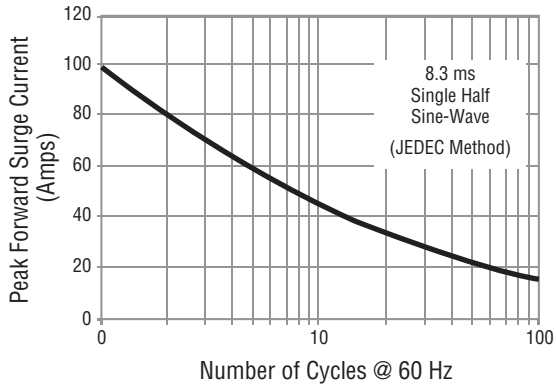
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Performance Graphs

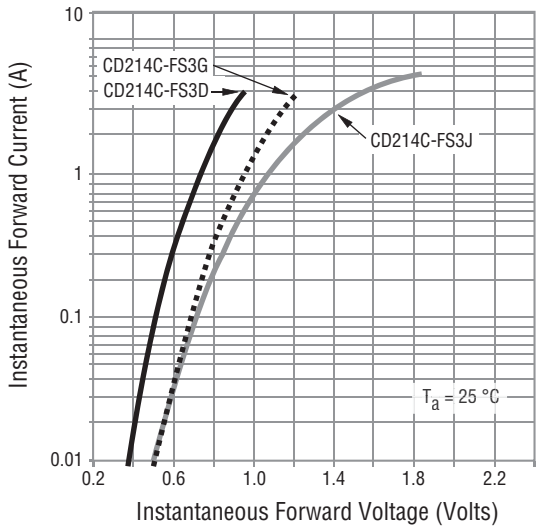
Forward Current Derating Curve



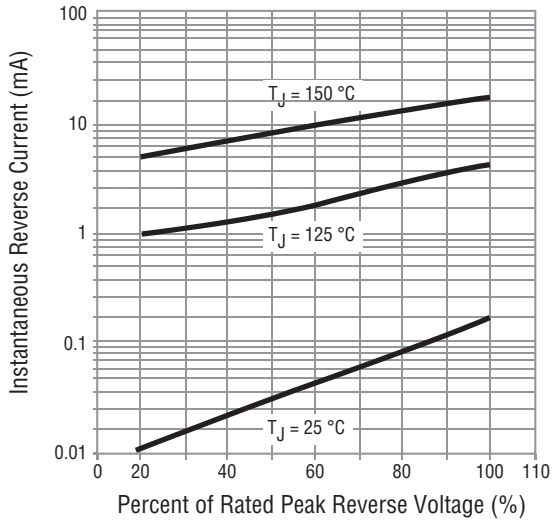
Maximum Peak Forward Surge Current



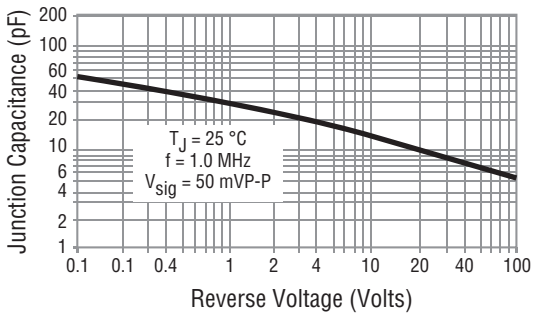
Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



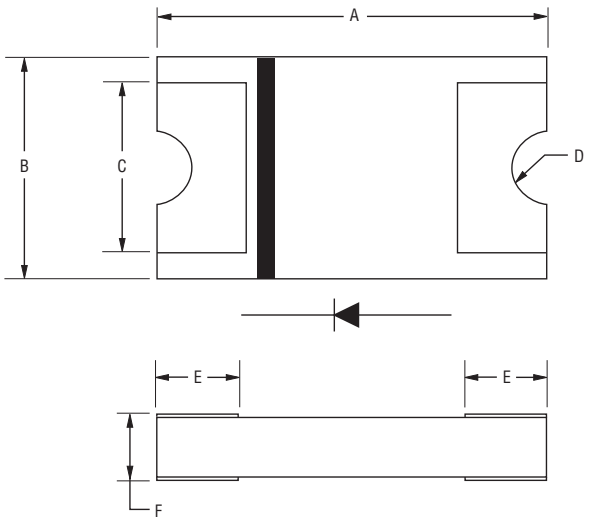
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CD214C-FS3x Series Fast Response Rectifier Chip Diode

BOURNS®

Product Dimensions



Dimension	CD214C-FS Series
A	8.0 ± 0.10 (0.315 ± 0.004)
B	5.0 ± 0.10 (0.197 ± 0.004)
C	3.90 (0.154) TYP.
D	0.80 ± 0.02 (0.031 ± 0.001)
E	1.95 ± 0.10 (0.077 ± 0.004)
F	1.10 ± 0.15 (0.043 ± 0.006)

DIMENSIONS: MM (INCHES)

How to Order

CD 214C - FS 3 D

Common Code
CD = Chip Diode

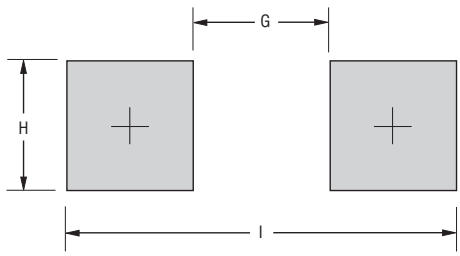
Package
214C = SMC/DO-214AB Compatible

Model
FS = Fast Response Rectifier

Maximum Average Forward Rectified Current
3 = 3 A

Maximum Repetitive Peak Reverse Voltage
D = 200 V
G = 400 V
J = 600 V

Recommended Pad Layout



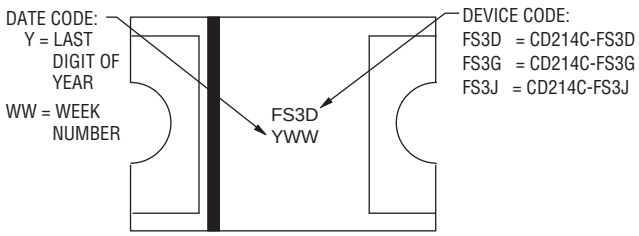
Dimension	CD214C-FS Series
G	4.10 (0.161) MAX.
H	3.90 (0154) MIN.
I	11.90 (0.469) REF.

DIMENSIONS: MM (INCHES)

Environmental Specifications

Moisture Sensitivity Level.....1
ESD Classification (HBM)..... 3B

Typical Part Marking

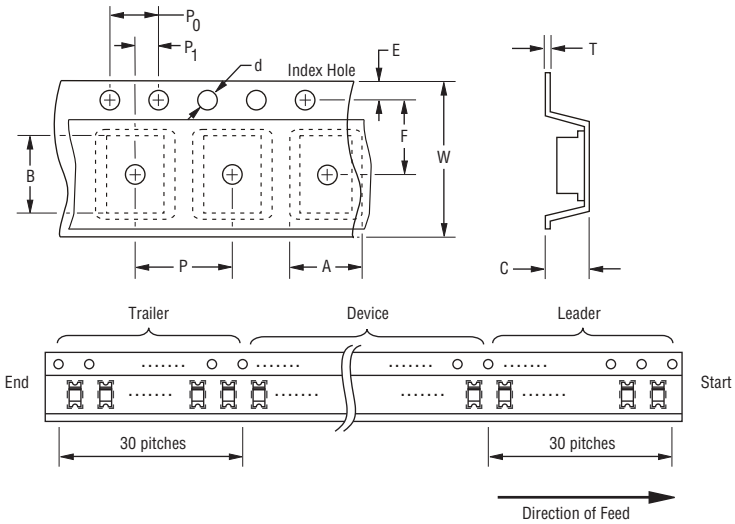


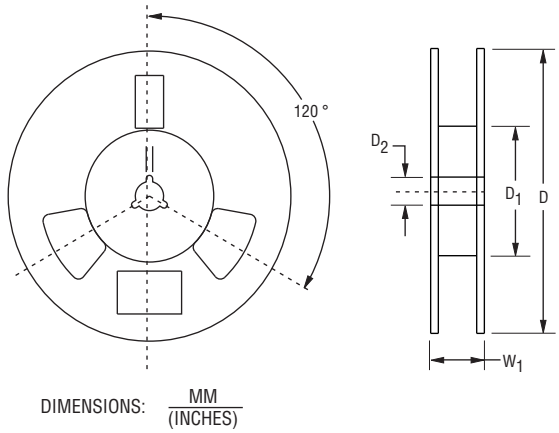
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Packaging Information

The product is dispensed in tape and reel format (see diagram below).





DIMENSIONS: MM / (INCHES)

Item	Symbol	CD214C-FS3 Series
Carrier Width	A	5.56 ± 0.10 (0.219 ± 0.004)
Carrier Length	B	8.18 ± 0.10 (0.322 ± 0.004)
Carrier Depth	C	2.50 (0.098) MAX.
Sprocket Hole	d	1.55 ± 0.05 (0.061 ± 0.002)
Reel Outside Diameter	D	330 ± 2.0 (12.992 ± 0.079)
Reel Inner Diameter	D_1	50.0 (1.969) MIN.
Feed Hole Diameter	D_2	13.0 ± 0.50 (0.512 ± 0.020)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 ± 0.004)
Punch Hole Position	F	7.50 ± 0.10 (0.295 ± 0.004)
Punch Hole Pitch	P	8.00 ± 0.10 (0.315 ± 0.004)
Sprocket Hole Pitch	P_0	4.00 ± 0.10 (0.157 ± 0.004)
Embossment Center	P_1	2.00 ± 0.10 (0.079 ± 0.004)
Overall Tape Thickness	T	0.40 (0.016) MAX.
Tape Width	W	16.00 ± 0.30 (0.630 ± 0.012)
Reel Width	W_1	22.7 (0.893) MAX.
Quantity per Reel	--	3,000

BOURNS®

Asia-Pacific:
Tel: +886-2 2562-4117
Email: asiacus@bourns.com

Europe:
Tel: +36 88 885 877
Email: eurocus@bourns.com

The Americas:
Tel: +1-951 781-5500
Email: americus@bourns.com

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