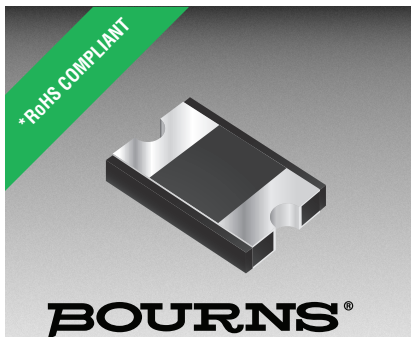




Features

- 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 (@ $T_A = 25^\circ\text{C}$ 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			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +175			$^\circ\text{C}$

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ 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 _{θJA}				60		°C/W
	Junction to Lead	R _{θJL}				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.

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

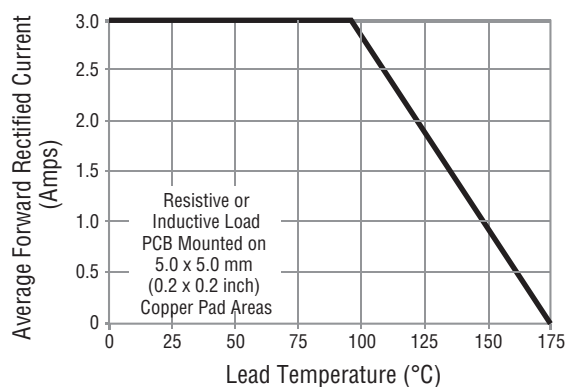
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

CD214C-FS3x Series Fast Response Rectifier Chip Diode

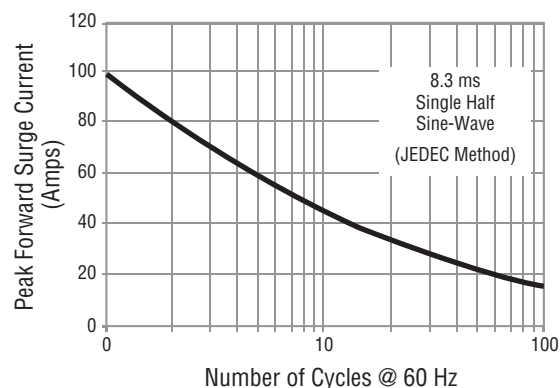
BOURNS®

Performance Graphs

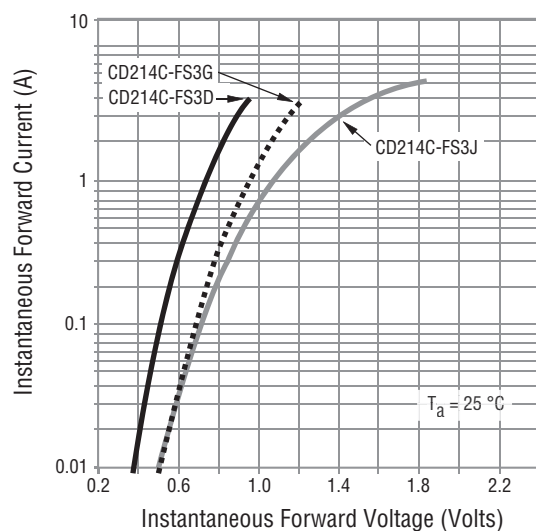
Forward Current Derating Curve



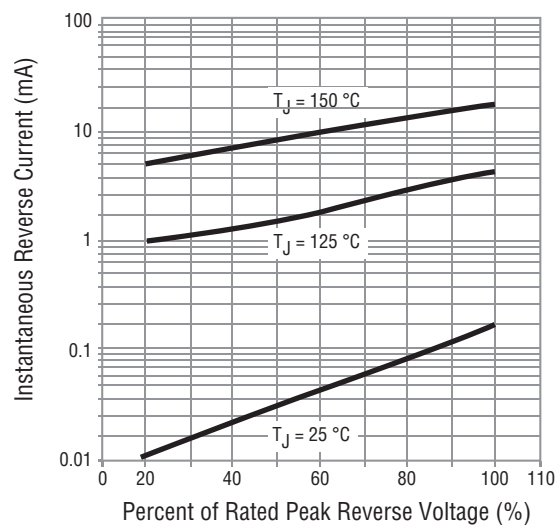
Maximum Peak Forward Surge Current



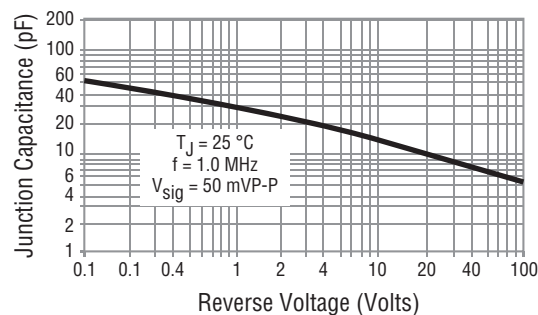
Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance

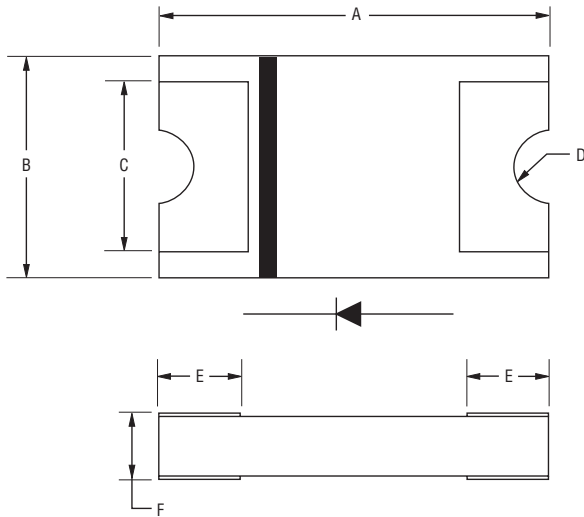


Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.

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 TYP. (0.154)
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)

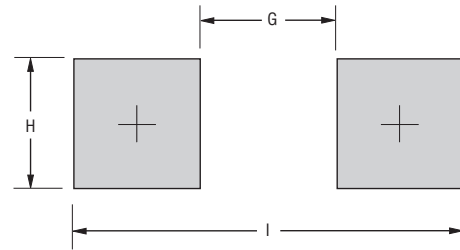
DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

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



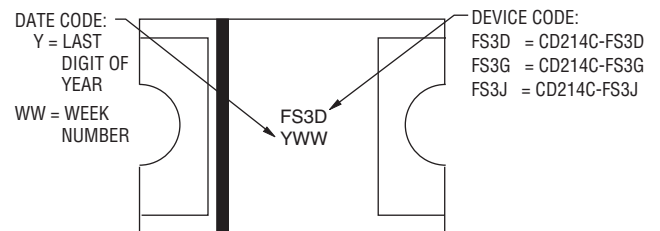
Dimension	CD214C-FS Series
G	4.10 MAX. (0.161)
H	3.90 MIN. (0.154)
I	11.90 REF. (0.469)

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

Environmental Specifications

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

Typical Part Marking



Specifications are subject to change without notice.

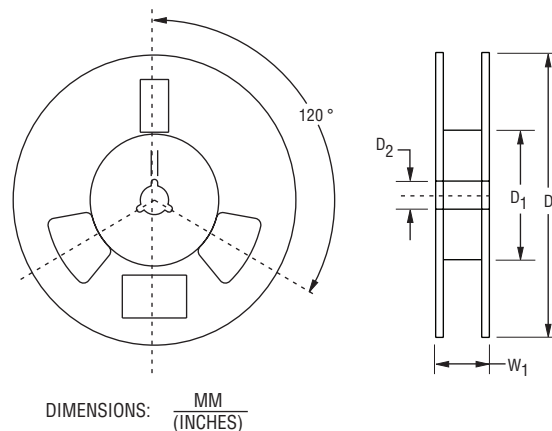
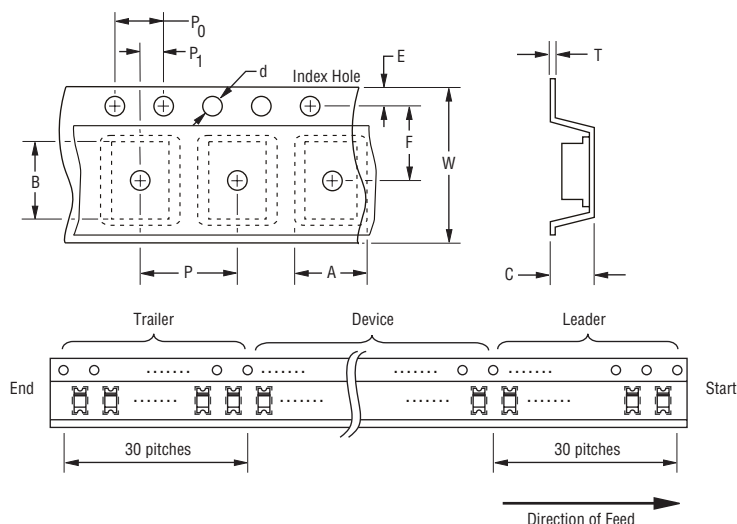
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

CD214C-FS3x Series Fast Response Rectifier Chip Diode

BOURNS®

Packaging Information

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



Item	Symbol	CD214C-FS3 Series
Carrier Width	A	$\frac{5.56 \pm 0.10}{(0.219 \pm 0.004)}$
Carrier Length	B	$\frac{8.18 \pm 0.10}{(0.322 \pm 0.004)}$
Carrier Depth	C	$\frac{2.50}{(0.098)} \text{ MAX.}$
Sprocket Hole	d	$\frac{1.55 \pm 0.05}{(0.061 \pm 0.002)}$
Reel Outside Diameter	D	$\frac{330 \pm 2.0}{(12.992 \pm 0.079)}$
Reel Inner Diameter	D ₁	$\frac{50.0}{(1.969)} \text{ MIN.}$
Feed Hole Diameter	D ₂	$\frac{13.0 \pm 0.50}{(0.512 \pm 0.020)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
Punch Hole Position	F	$\frac{7.50 \pm 0.10}{(0.295 \pm 0.004)}$
Punch Hole Pitch	P	$\frac{8.00 \pm 0.10}{(0.315 \pm 0.004)}$
Sprocket Hole Pitch	P ₀	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Embossment Center	P ₁	$\frac{2.00 \pm 0.10}{(0.079 \pm 0.004)}$
Overall Tape Thickness	T	$\frac{0.40}{(0.016)} \text{ MAX.}$
Tape Width	W	$\frac{16.00 \pm 0.30}{(0.630 \pm 0.012)}$
Reel Width	W ₁	$\frac{22.7}{(0.893)} \text{ MAX.}$
Quantity per Reel	--	3,000

BOURNS®

Asia-Pacific:

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

Europe:

Tel: +36 88 520 390
Email: eurocus@bourns.com

The Americas:

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

www.bourns.com

01/18

Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.