

CD214A-R150~R12000 Glass Passivated Rectifiers

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Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	CD214A-						Unit
		R1800	R11000	R11100	R11200	R11600	R12000	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	800	1000	1100	1200	1600	2000	V
Maximum RMS Voltage	V _{RMS}	560	700	770	840	1120	1400	V
Maximum DC Blocking Voltage	V _{DC}	800	1000	1100	1200	1600	2000	V
Max. Average Forward Rectified Current ¹	I _(AV)	1.0						A
DC Reverse Current @ Rated DC Blocking Voltage (@T _J = 25 °C)	I _R	5.0						μA
DC Reverse Current @ Rated DC Blocking Voltage (@T _J = 125 °C)	I _R	30		50				μA
Typ. Junction Capacitance ²	C _J	12						pF
Maximum Instantaneous Forward Voltage @ 1 A	V _F	1.0		1.25			2.0	V
Typical Thermal Resistance ³	R _{θJA}	75						°C/W
	R _{θJL}	27						°C/W
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30		25			30	A

Notes:

1 See Forward Derating Curve.

2 Measured @ 1.0 MHz and applied reverse voltage of 4.0 VDC.

3 Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.

Thermal Characteristics (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	CD214A-R150~R12000	Unit
Operating Temperature Range	T_J	-65 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +175	$^\circ\text{C}$

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

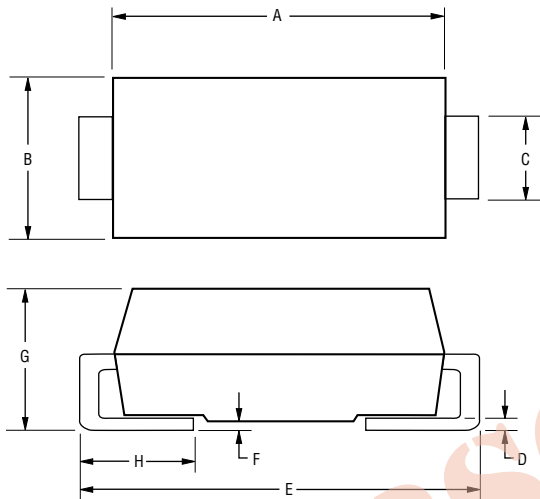
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Product Dimensions

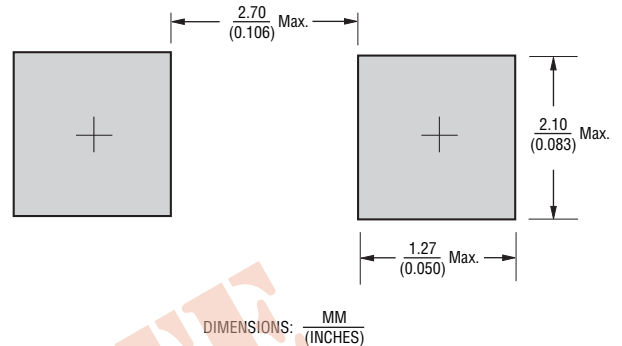
This is an RoHS compliant molded plastic package. The polarity is indicated by a cathode band and weighs approximately 0.064 g. The package and dimensions are shown below.



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

Dimensions	DO-214AC (SMA)
A	$\frac{4.06 - 4.57}{(0.160 - 0.180)}$
B	$\frac{2.29 - 2.92}{(0.090 - 0.115)}$
C	$\frac{1.27 - 1.63}{(0.050 - 0.064)}$
D	$\frac{0.15 - 0.31}{(0.006 - 0.112)}$
E	$\frac{4.83 - 5.59}{(0.190 - 0.220)}$
F	$\frac{0.05 - 0.20}{(0.002 - 0.008)}$
G	$\frac{2.01 - 2.62}{(0.080 - 0.103)}$
H	$\frac{0.76 - 1.52}{(0.030 - 0.060)}$

Recommended Pad Layout



Physical Specifications

CaseMolded plastic per UL Class 94V-0
 PolarityBand indicates diode cathode
 Weight0.002 ounces / 0.064 grams

How To Order

Common Code **CD 214A - R 1 50**
 Chip Diode
 Package
 • 214A = SMA/DO-214AC
 Model
 R = Glass Passivated Rectifiers
 Forward Current I_{AV}
 1 = 1 A
 Reverse Voltage
 50 = 50 V 1000 = 1000 V
 100 = 100 V 1100 = 1100 V
 200 = 200 V 1200 = 1200 V
 400 = 400 V 1600 = 1600 V
 600 = 600 V 2000 = 2000 V
 800 = 800 V

Typical Part Marking

CD214A-R150 **B** R1A
 CD214A-R1100 **B** R1B
 CD214A-R1200 **B** R1D
 CD214A-R1400 **B** R1G
 CD214A-R1600 **B** R1J
 CD214A-R1800 **B** R1K
 CD214A-R11000 **B** R1M
 CD214A-R11100 **B** R1N
 CD214A-R11200 **B** R1Q
 CD214A-R11600 **B** R1Y
 CD214A-R12000 **B** R1Z

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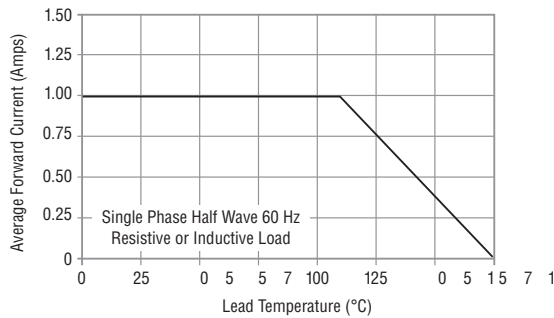
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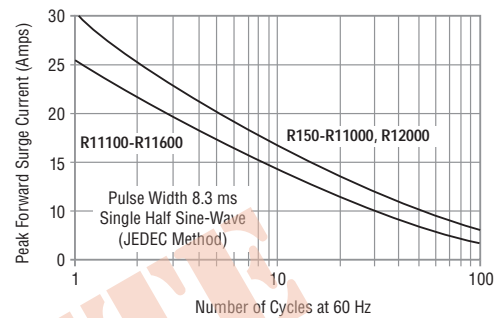
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Rating and Characteristic Curves

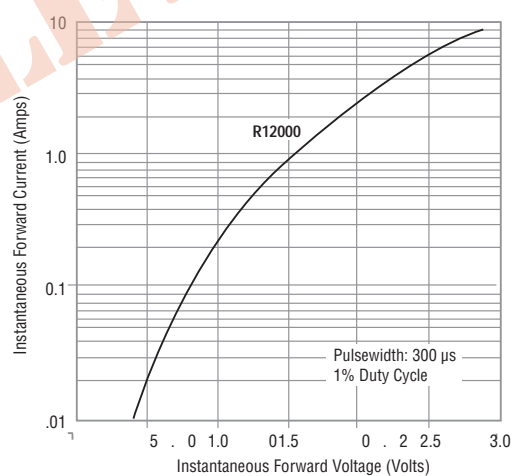
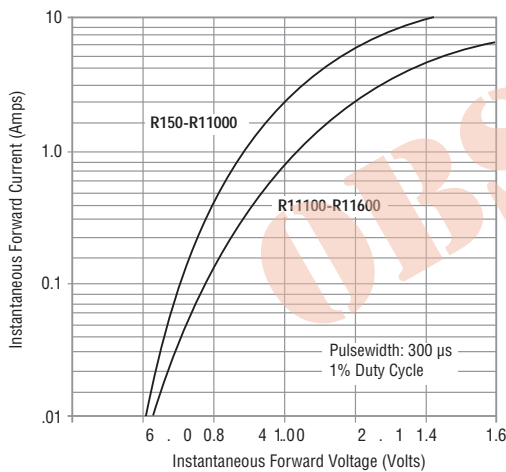
Forward Current Derating Curve



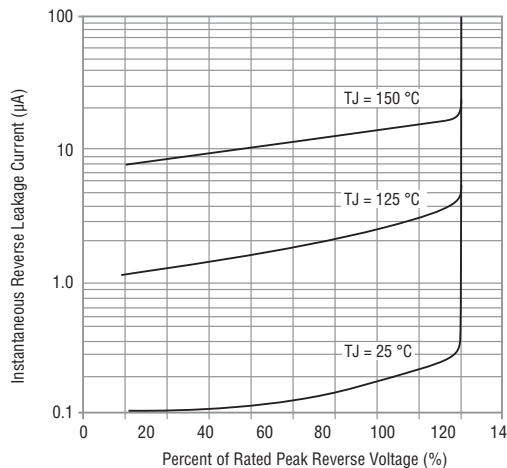
Non-Repetitive Surge Current



Forward Characteristics



Reverse Characteristics



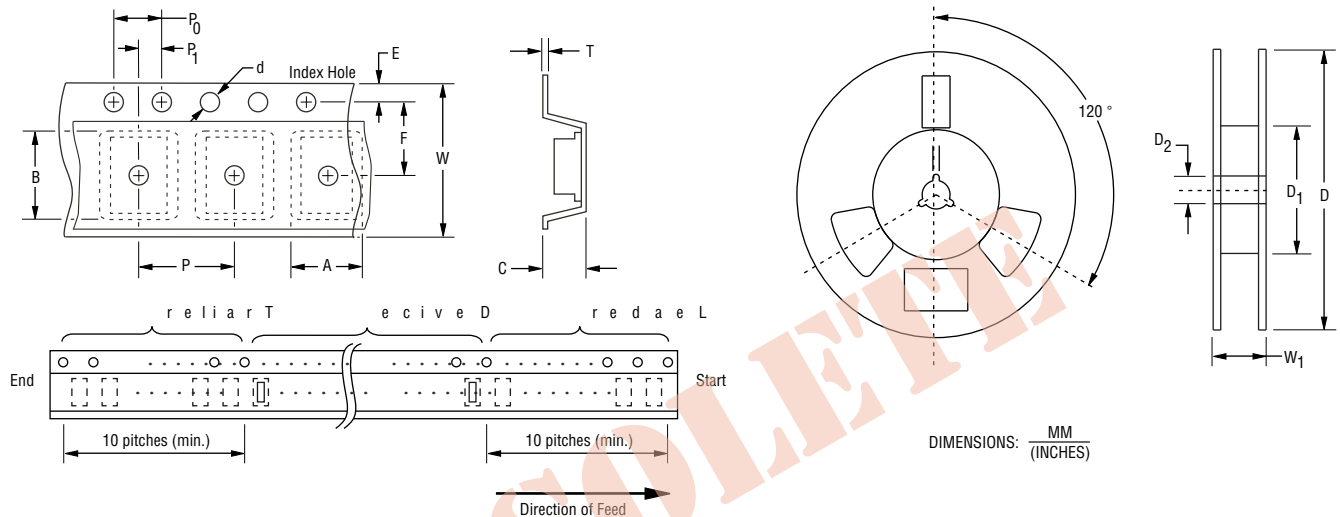
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Packaging Information

The surface mount product is packaged in a 12 mm x 4 mm tape and reel format per EIA-481 standard.



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

Item	Symbol	DO-214AC (SMA)
Carrier Width	A	$\frac{3.42 \pm 0.10}{(0.134 \pm 0.004)}$
Carrier Length	B	$\frac{5.07 \pm 0.10}{(0.199 \pm 0.004)}$
Carrier Depth	C	$\frac{3.10 \pm 0.10}{(0.122 \pm 0.004)}$
Sprocket Hole	d	$\frac{1.55 \pm 0.05}{(0.061 \pm 0.002)}$
Reel Outside Diameter	D	$\frac{330}{(12.992)}$
Reel Inner Diameter	D1	$\frac{50.0}{(1.969)} \text{ Min.}$
Feed Hole Diameter	D2	$\frac{13.0 \pm 0.50}{(0.512 \pm 0.020)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
Punch Hole Position	F	$\frac{5.50 \pm 0.50}{(0.217 \pm 0.020)}$
Punch Hole Pitch	P	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Sprocket Hole Pitch	P0	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Embossment Center	P1	$\frac{2.00 \pm 0.05}{(0.079 \pm 0.002)}$
Overall Tape Thickness	T	$\frac{0.30 \pm 0.10}{(0.012 \pm 0.004)}$
Tape Width	W	$\frac{12.00 \pm 0.20}{(0.420 \pm 0.008)}$
Reel Width	W1	$\frac{18.7}{(0.736)} \text{ Max.}$
Quantity per Reel	—	7,500

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