

## SURFACE MOUNT ULTRAFAST RECTIFIER

UF1A - UF1K



DO-214AA (SMB)  
Surface Mount Package

Polarity : Colour band denotes cathode end

Ultrafast Recovery Times for High Efficiency

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C Ambient Temperature unless specified otherwise. Single Phase, half wave 60 Hz, Resistive or Inductive Load. For Capacitive Load, Derate Current by 20%

DESCRIPTION	SYMBOL	UF1A	UF1B	UF1D	UF1G	UF1J	UF1K	UNIT
Maximum Peak Repetitive Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	V
Maximum Average Forward Rectified Current 0.375"(9.5mm) Lead Length at $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.0						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30						A
Maximum Forward Voltage at $I_F=1.0\text{A}$	$V_F$	1.0		1.4		1.7		V
Maximum DC Reverse Current $T_a=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a=100^\circ\text{C}$	$I_R$	10 100						$\mu\text{A}$ $\mu\text{A}$
Typical Junction Capacitance	** $C_j$	17						pF
Typical Thermal Resistance Junction to Lead	*** $R_{th(J-L)}$	30						$^\circ\text{C/W}$
Maximum Reverse Recovery Time	* $T_{RR}$	50				100		ns
Operating Junction and Storage Temperature Range	$T_j, T_{stg}$	- 50 to +150						$^\circ\text{C}$

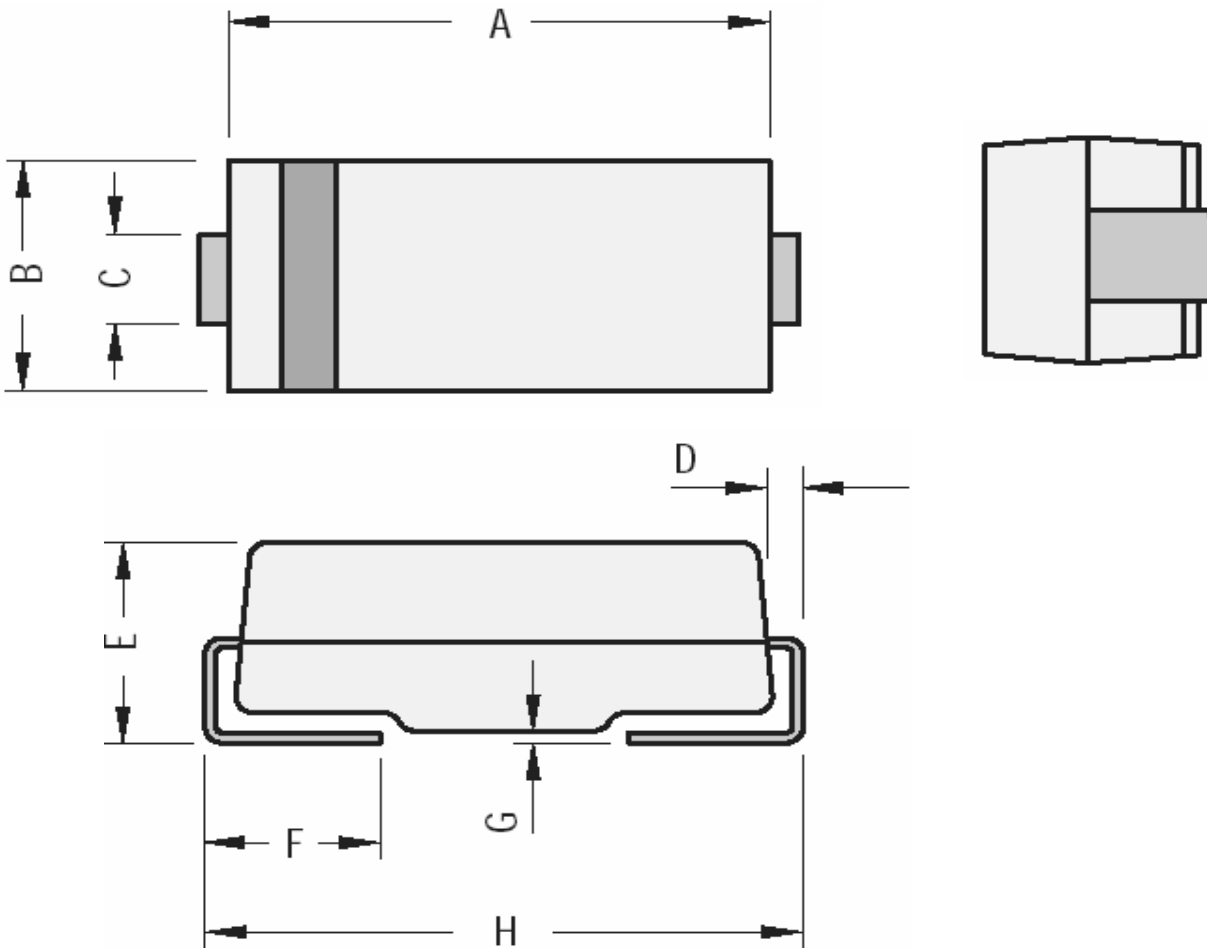
\*Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

\*\*Measured at 1 MHz and Applied  $V_R=4\text{V}$

\*\*\* $8.0\text{mm}^2$  (0.013mm thick) Land Areas

UF1A\_1KRev180705E

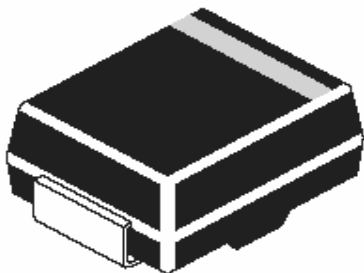
DO-214AA (SMB) SMD Plastic Package



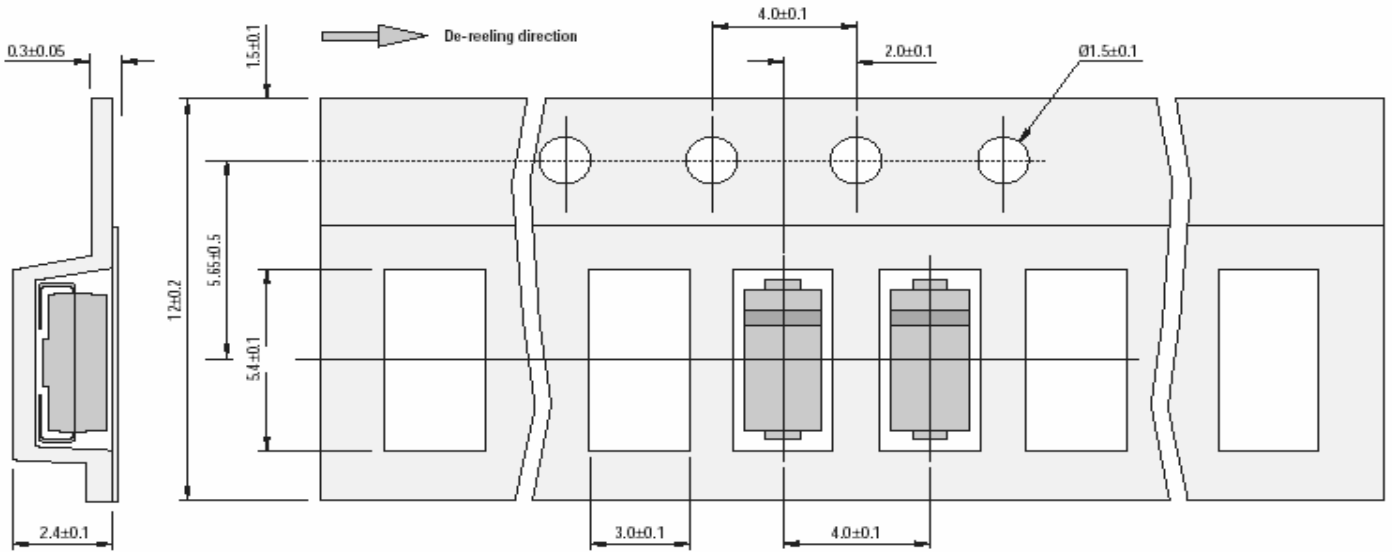
DIM	Min	Max
A	4.06	4.57
B	3.30	3.94
C	1.96	2.11
D	0.152	0.305

DIM	Min	Max
E	2.13	2.44
F	0.76	1.52
G	0.102	0.203
H	5.21	5.59

All Dimensions are in mm



SMB Packing Tape



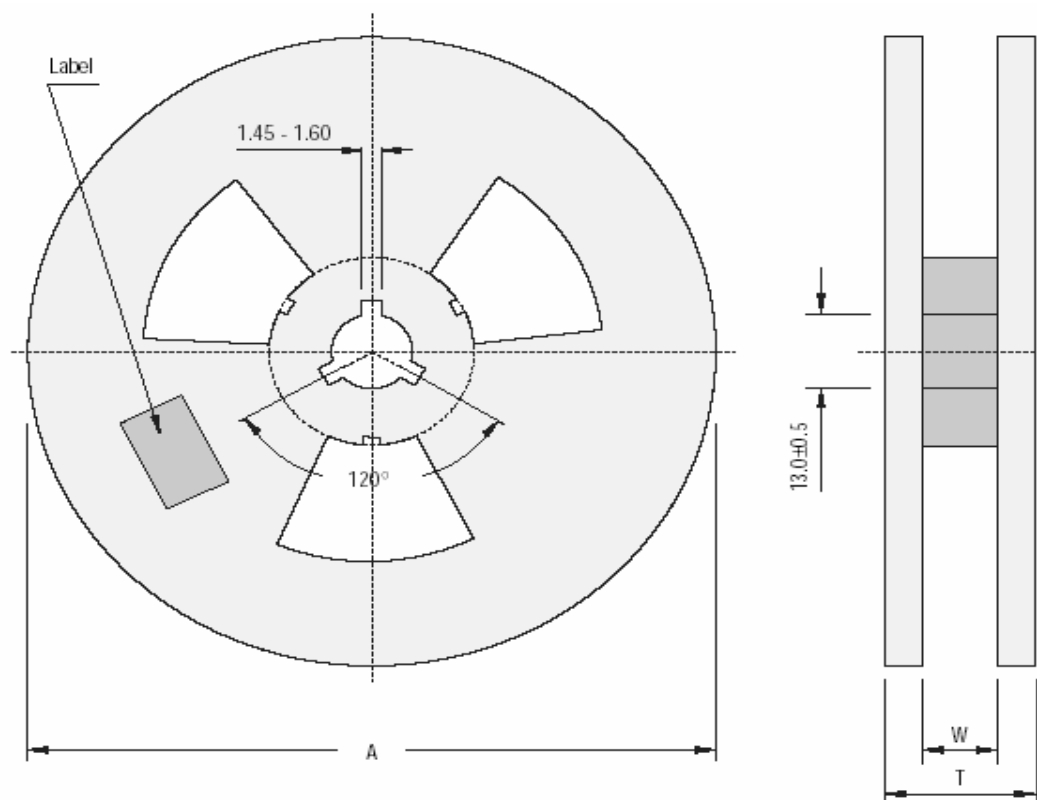
All Dimensions are in mm

Packaging Information

Package/ Case Type	Packaging Type	Std. Packing		Inner Carton		Outer Carton		
		Qty	Qty	Size L x W x H (cm)	Gross Weight (Kg)	Qty	Size L x W x H (cm)	Gross Weight (Kg)
DO-214AA (SMB)	T&R	5,000				50K	46 x 38 x 22	8.9

T & R: Tape and Reel

**Reel Dimensions for SMD Package**



**Reel Specifications**

Package	Tape Width	Reel Dia. A - Max	Inside Thickness W	Reel Thickness T - max
DO-214AA (SMB)	12	330	12.4 ± 2	18.4

All Dimensions are in mm

**Component Disposal Instructions**

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

**Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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