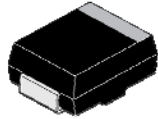


2A SURFACE MOUNT ULTRA FAST RECTIFIERS

UF2A ~ UF2M



DO-214AA (SMB)

DO214-AA(SMB)
Surface Mount
Plastic Package
RoHS compliant

Polarity : Colour band denotes cathode end

FEATURE:

1. Glass Passivated Chip
2. Low Reverse Leakage
3. High Forward Surge Current Capability
4. Ultra Fast Switching for High Efficiency
5. The Plastic Package carries Underwriters Laboratory Flammability Classification 94V-O.
6. High Temperature Soldering Guaranteed : 250°C/10 seconds at terminals.

ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C Unless otherwise specified)

PARAMETER	SYMBOL	UF2A	UF2B	UF2D	UF2G	UF2J	UF2K	UF2M	UNIT
Maximum Peak repetitive reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_L=110^\circ\text{C}$	$I_{(AV)}$	2.0							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50							A
Maximum Instantaneous Forward Voltage at 2.0A	V_F	1		1.3		1.7		V	
Maximum DC Reverse Current $T_A=25^\circ\text{C}$	I_R	10							μA
at rated DC Blocking Voltage $T_A=100^\circ\text{C}$		200							
Maximum Reverse Recovery Time (Note 1)	t_{rr}	50				75			ns
Typical Junction Capacitance (Note 2)	C_j	20							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Typical Thermal Resistance (Note 4)	$R_{\theta JL}$	20							$^\circ\text{C/W}$
Operating Junction Temperature Range Storage Temperature Range	T_j, T_{stg}	-65 to +150							$^\circ\text{C}$

Note:

1. Reverse Recovery Condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Measured at 1.0MHz and Applied Average Voltage of 4.0V DC
3. PCB mounted with 0.2 X 0.2" (5.0X 5.0mm) copper pad area
4. 8.0 mm² (.013mm thick) land areas.

UF2A ~ UF2M

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TYPICAL CHARACTERISTICS CURVES

Fig 1: Forward Current Derating Curve

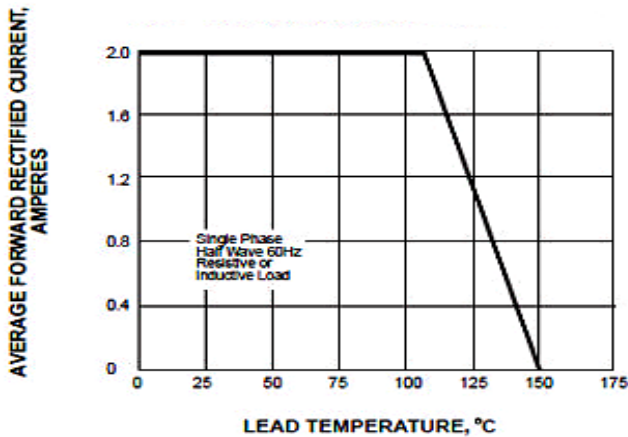


Fig 2: Typical Instantaneous Forward Characteristics

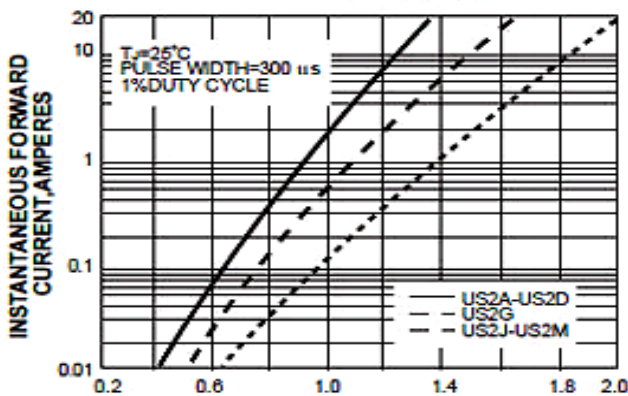


Fig 3: Typical Junction Capacitance

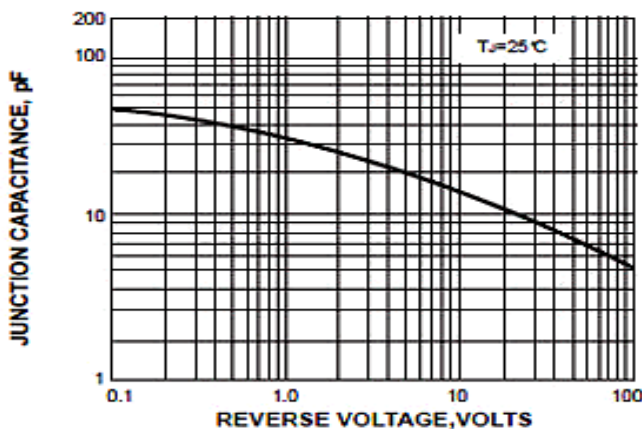


Fig 4: Maximum Non-Repetitive Peak Forward Surge Current

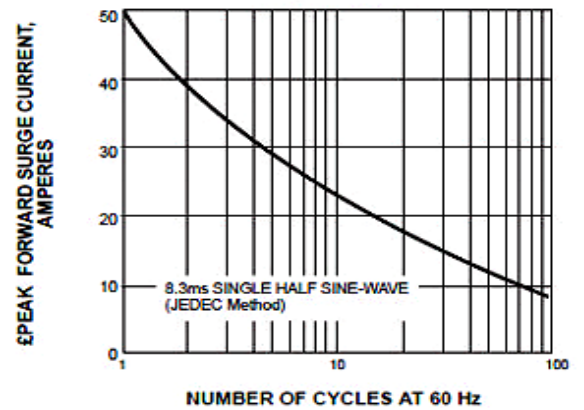


Fig 5: Typical Reverse Characteristics

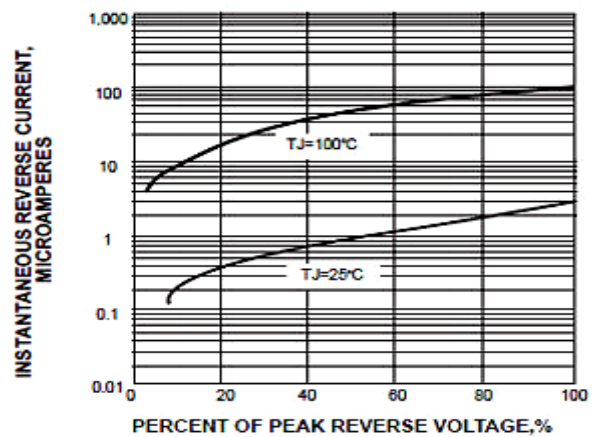
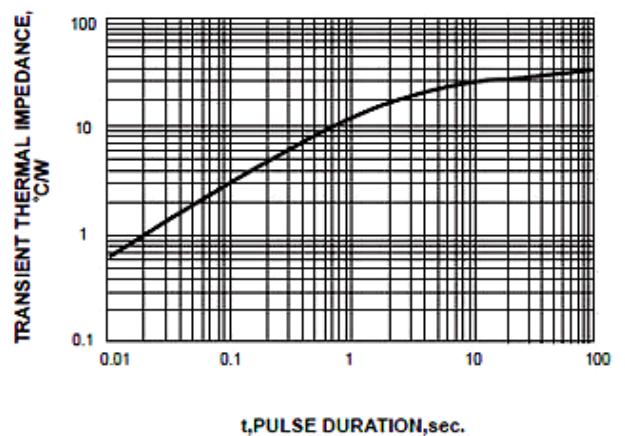
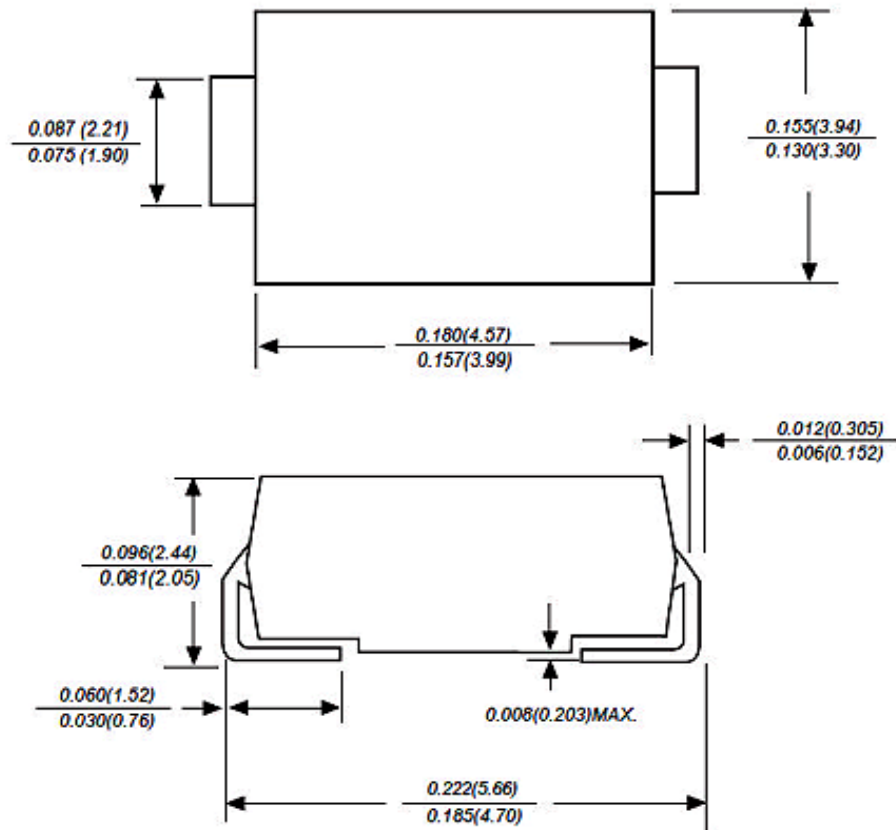


Fig 6: Typical Transient Thermal Impedance



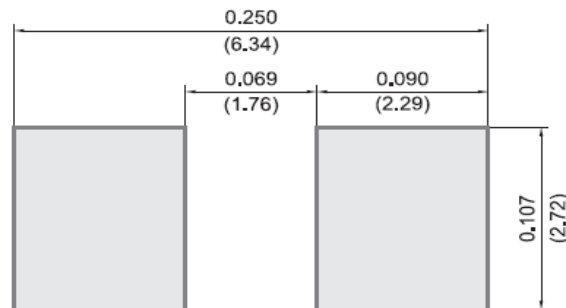
Package Details

DO-214AA (SMB) Package Outline and Dimension



Dimensions in Inches and (millimeters)

Mounting Pad Layout



Dimensions in Inches and (millimeters)



Continental Device India Pvt. Limited

An IATF 16949, ISO9001 and ISO 14001 Certified Company



Recommended Product Storage Environment for Discrete Semiconductor Devices

This storage environment assumes that the Diodes and transistors are packed properly inside the original packing supplied by CDIL.

- Temperature 5 °C to 30 °C
- Humidity between 40 to 70 %RH
- Air should be clean.
- Avoid harmful gas or dust.
- Avoid outdoor exposure or storage in areas subject to rain or water spraying .
- Avoid storage in areas subject to corrosive gas or dust. Product shall not be stored in areas exposed to direct sunlight.
- Avoid rapid change of temperature.
- Avoid condensation.
- Mechanical stress such as vibration and impact shall be avoided.
- The product shall not be placed directly on the floor.
- The product shall be stored on a plane area. They should not be turned upside down. They should not be placed against the wall.

Shelf Life of CDIL Products

The shelf life of products is the period from product manufacture to shipment to customers. The product can be unconditionally shipped within this period. The period is defined as 2 years.

If products are stored longer than the shelf life of 2 years the products shall be subjected to quality check as per CDIL quality procedure.

The products are further warranted for another one year after the date of shipment subject to the above conditions in CDIL original packing.

Floor Life of CDIL Products and MSL Level

When the products are opened from the original packing, the floor life will start.

For this, the following JEDEC table may be referred:

JEDEC MSL Level		
Level	Time	Condition
1	Unlimited	≤30 °C / 85% RH
2	1 Year	≤30 °C / 60% RH
2a	4 Weeks	≤30 °C / 60% RH
3	168 Hours	≤30 °C / 60% RH
4	72 Hours	≤30 °C / 60% RH
5	48 Hours	≤30 °C / 60% RH
5a	24 Hours	≤30 °C / 60% RH
6	Time on Label(TOL)	≤30 °C / 60% RH

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Customer Notes

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 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 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). CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



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