



Continental Device India Pvt. Limited

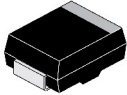
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Schottky Barrier Rectifiers Surface Mounted 1.0A 60V

SL16

**DO-214AC(SMA)
Surface Mount Package
RoHS compliant**



DO-214AC (SMA)

FEATURES:

1. The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
2. For surface mounted applications
3. Built-in strain relief, ideal for automated placement
4. Low reverse leakage
5. High forward surge current capability
6. High temperature soldering guaranteed

APPLICATIONS: Rectification with low V_F , Free wheeling

ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25° C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, or capacitive load current derate by 20%.)

Parameter	Symbol	Value	Unit	
Maximum repetitive peak reverse voltage	V_{RRM}	60	V	
Maximum RMS voltage	V_{RMS}	42	V	
Maximum DC blocking voltage	V_{DC}	60	V	
Maximum average forward rectified current at $T_L = 100^\circ C$	$I_{(AV)}$	1.0	A	
Peak forward surge current, 8.3ms single half current, 8.3ms single half	I_{FSM}	30	A	
Peak forward surge current, 8.3ms single half	V_F	0.56	V	
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A = 25^\circ C$	0.5	mA
		$T_A = 125^\circ C$	50	
Typical thermal resistance	$R_{\theta JA}$	80	$^\circ C/W$	
Operating junction temperature range	T_j	-55 to +125	$^\circ C$	
Storage temperature range	T_{stg}	-55 to +150	$^\circ C$	

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Typical Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

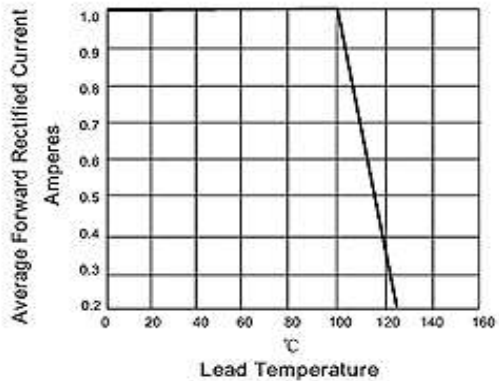


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

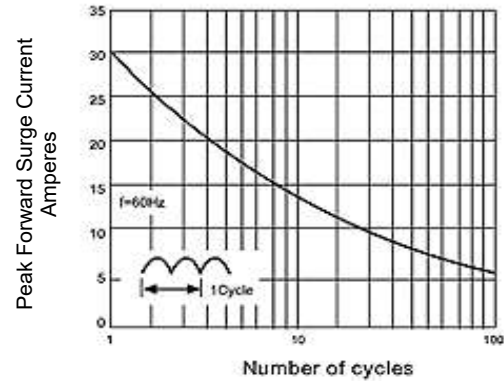


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

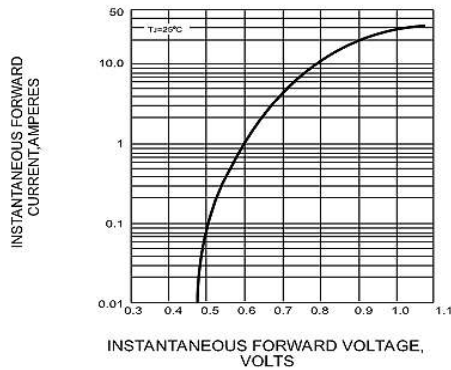
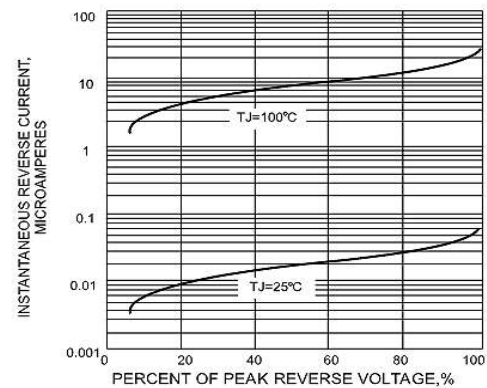


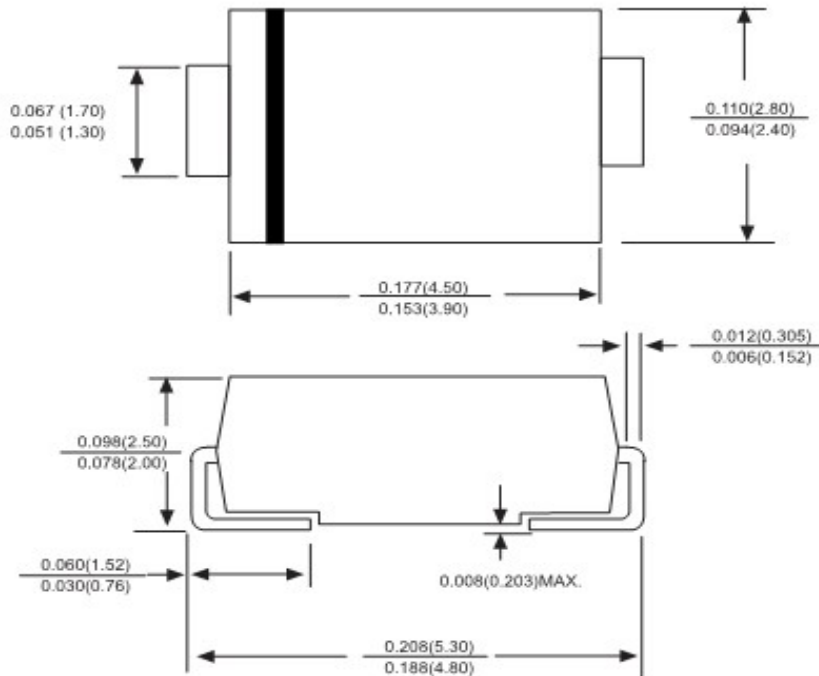
FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



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PACKAGE DETAILS

DO-214AC(SMA) Surface Mount Package

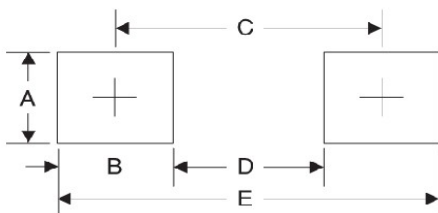


Dimensions in inches and (millimeters)

Mechanical Data

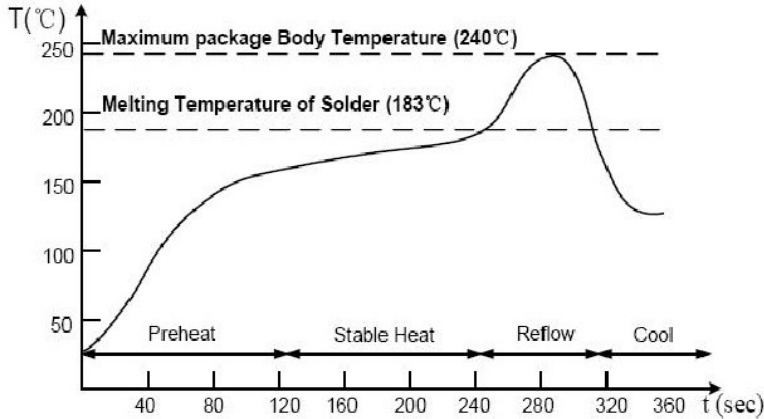
- 1 Case : Moulded plastic body
- 2 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- 3 Polarity : Polarity symbol marking on body
- 4 Mounting Position : Any
- 5 Weight : 0.0023 ounce, 0.07 grams

Recommended Soldering Footprint



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.90	0.154
D	2.41	0.095
E	5.45	0.215

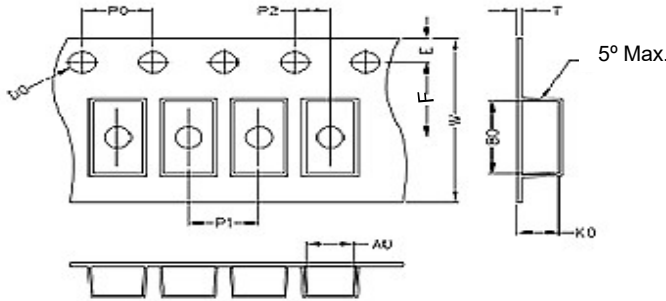
Suggested Soldering Temperature Profile



1. Recommended reflow methods: IR, vapour phase oven, hot air oven, wave solder.
2. The device can be exposed to a maximum temperature of 260°C for 10 seconds.
3. Devices can be cleaned using standard industry methods and solvents.
4. If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
2.80	5.30	2.36	1.55	1.75	5.50
P0	P1	P2	T	W	Tolerance
4.0	4.0	2.0	0.25	12	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMA	11'	278	5	285	10	355*310*310	80
	13'	330	7.5	340	15	360*360*360	120

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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 commended 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).



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