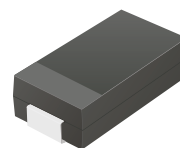


# ACGRAS1W-HF

**Reverse Voltage: 1600 Volts**
**Forward Current: 1.0 Amp**
**RoHS Device**
**Halogen Free**


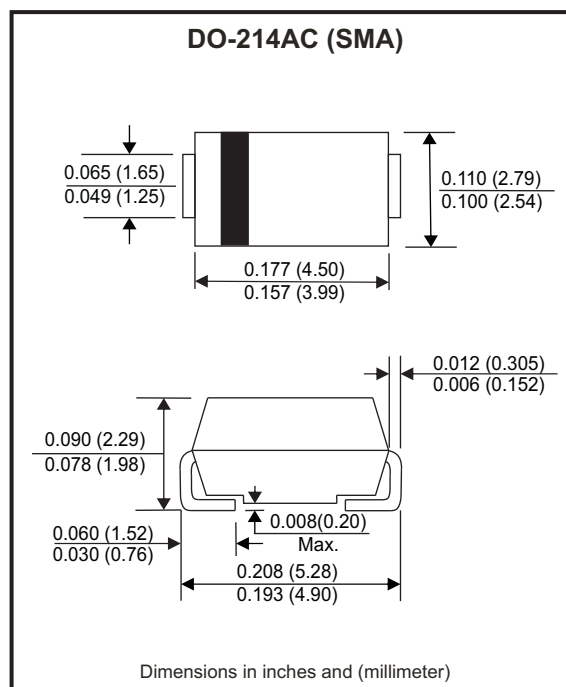
## Features

- Glass passivation junction.
- High current capability.
- High surge current capability.
- Low reverse current.
- Comply with AEC-Q101

## Mechanical data

- Case: DO-214AC / SMA, molded plastic.
- Epoxy: UL flammability classification rate 94V-0.
- Terminals: Lead free plating (Tin finish).
- Solderable per MIL-STD-202, Method 208.
- Polarity: Indicated by cathode band.
- Weight: 0.062 grams(approx.).

## Circuit diagram



## Maximum Ratings (at TA=25°C unless otherwise noted)

| Parameter                                                                                         | Symbol          | ACGRAS1W-HF | Units   |
|---------------------------------------------------------------------------------------------------|-----------------|-------------|---------|
| Max. repetitive peak reverse voltage                                                              | $V_{RRM}$       | 1600        | V       |
| Max. DC blocking voltage                                                                          | $V_{DC}$        | 1600        | V       |
| Max. RMS voltage                                                                                  | $V_{RMS}$       | 1120        | V       |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$       | 30          | A       |
| Max. average forward rectified current                                                            | $I_F$           | 1.0         | A       |
| Max. instantaneous forward voltage<br>$I_F=1.0A$ @ 25°C                                           | $V_F$           | 1.2         | V       |
| Max. DC reverse current at rated                                                                  | $I_R$           | 5           | $\mu A$ |
| DC blocking voltage                                                                               | $I_R$           | 50          |         |
| Typical junction capacitance (Note 1)                                                             | $C_J$           | 10          | pF      |
| Typical thermal resistance                                                                        | $R_{\theta JC}$ | 70          | °C/W    |
| Operating temperature range                                                                       | $T_J$           | -55 to +150 | °C      |
| Storage temperature range                                                                         | $T_{STG}$       | -55 to +150 | °C      |

Notes: 1. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.

Company reserves the right to improve product design , functions and reliability without notice.

REV: A

## Rating and Characteristic Curves (ACGRAS1W-HF)

Fig.1 - Typical Forward Current Derating Curve

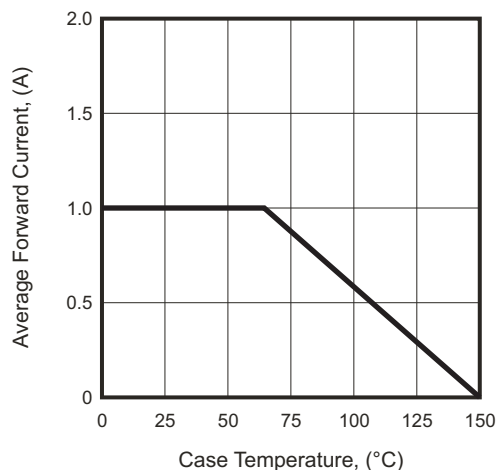


Fig.2 - Typical Forward Characteristics

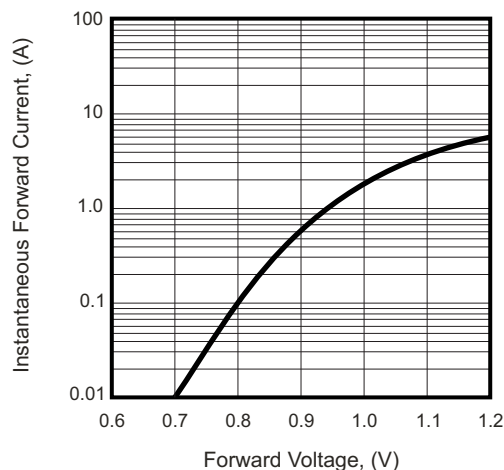


Fig.3 - Maximum Non-repetitive Forward Surge Current

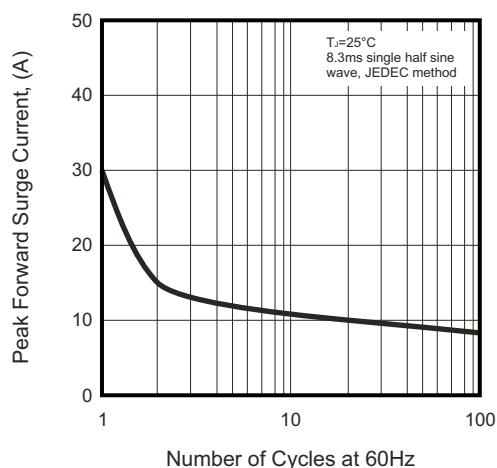


Fig.4 - Typical Reverse Characteristics

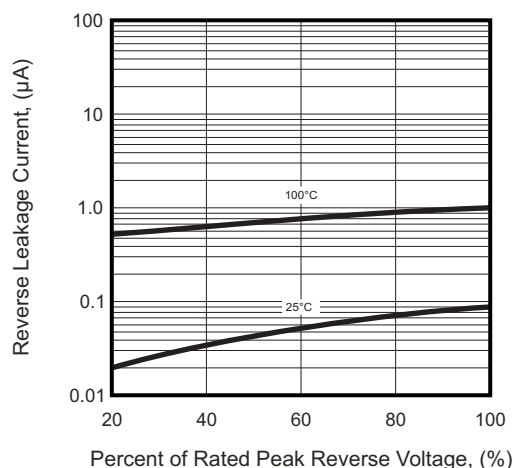
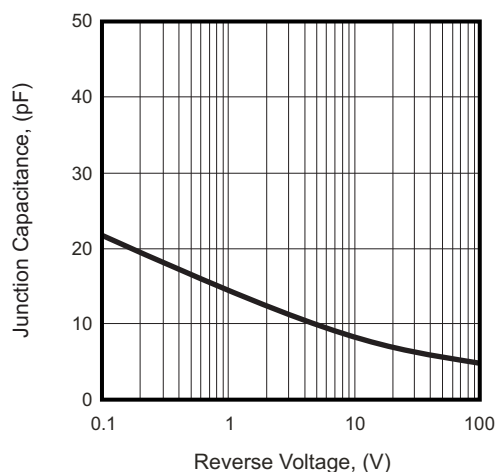
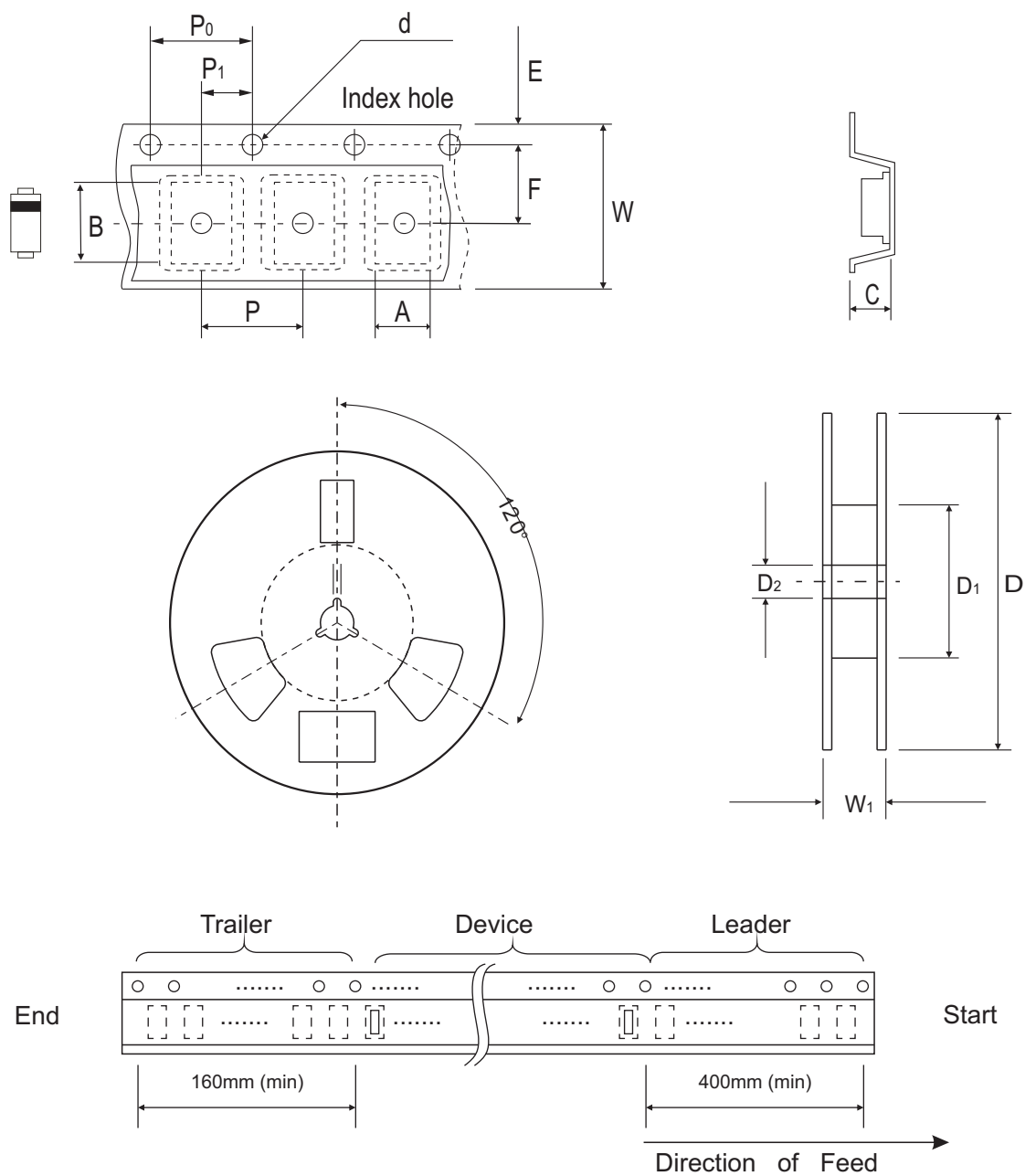


Fig.5 - Typical Junction Capacitance



Reel Taping Specification



| DO-214AC<br>(SMA) | SYMBOL | A          | B          | C          | d             | D             | D <sub>1</sub> | D <sub>2</sub> |
|-------------------|--------|------------|------------|------------|---------------|---------------|----------------|----------------|
|                   | (mm)   | 2.90 MAX.  | 5.90 MAX.  | 2.66 MAX.  | 1.50 ± 0.10   | 330 ± 2.00    | 50 MIN.        | 13.50 ± 1.00   |
|                   | (inch) | 0.114 MAX. | 0.232 MAX. | 0.105 MAX. | 0.059 ± 0.004 | 13.00 ± 0.079 | 1.969 MIN.     | 0.531 ± 0.039  |

| DO-214AC<br>(SMA) | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | W             | W <sub>1</sub> |
|-------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|----------------|
|                   | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10    | 2.00 ± 0.05    | 12.00 ± 0.30  | 18.40 MAX.     |
|                   | (inch) | 0.069 ± 0.004 | 0.217 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.002  | 0.472 ± 0.012 | 0.724 MAX.     |

Company reserves the right to improve product design , functions and reliability without notice.

## Marking Code

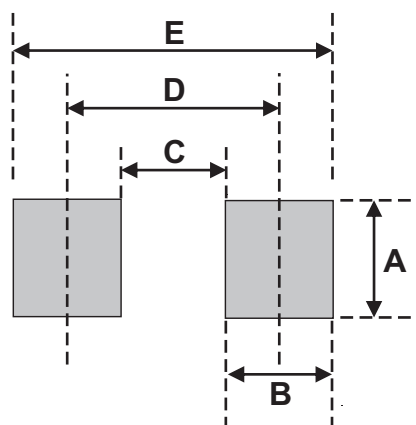
| Part Number | Marking code |
|-------------|--------------|
| ACGRAS1W-HF | S1W          |



XXX = Product type marking code

## Suggested PAD Layout

| SIZE | DO-214AC (SMA) |        |
|------|----------------|--------|
|      | (mm)           | (inch) |
| A    | 1.70           | 0.067  |
| B    | 2.50           | 0.098  |
| C    | 1.50           | 0.059  |
| D    | 4.00           | 0.157  |
| E    | 6.50           | 0.256  |



Note:

1.The pad layout is for reference purposes only.

## Standard Packaging

| Case Type         | REEL PACK       |                     |
|-------------------|-----------------|---------------------|
|                   | REEL<br>( pcs ) | Reel Size<br>(inch) |
| DO-214AC<br>(SMA) | 5,000           | 13                  |

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Comchip Technology:](#)

[ACGRAS1W-HF](#)