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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# ACPDUC24V-HF

RoHS Device  
Halogen Free



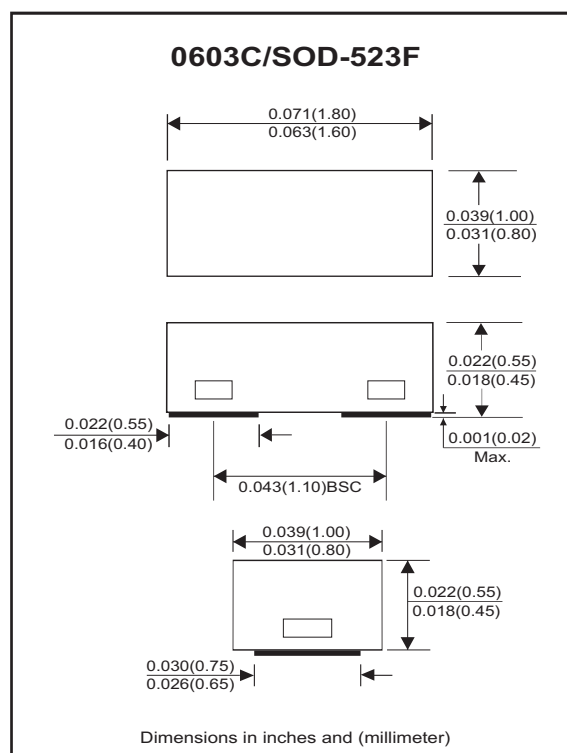
## Features

- Bi-directional ESD protection.
- Surface mount package.
- High component density.
- Comply with AEC-Q101

## Mechanical data

- Case: 0603C/SOD-523F standard package, molded plastic.
- Terminals: Matte tin plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.003 grams(approx.).

## Circuit diagram



## Electrical Characteristics (at TA=25°C unless otherwise noted)

| Parameter               | Conditions                                   | Symbol    | Min | Typ | Max     | Unit          |
|-------------------------|----------------------------------------------|-----------|-----|-----|---------|---------------|
| Diode breakdown voltage | $I_R = 1\text{mA}$                           | $V_{BD}$  | 25  | 28  |         | V             |
| Leakage current         | $V_R = 24\text{V}$                           | $I_L$     |     | 0.1 | 2.0     | $\mu\text{A}$ |
| Junction capacitance    | $V_R = 0\text{V}, f = 1\text{MHz}$           | $C_T$     |     | 10  | —       | pF            |
| ESD capability          | IEC 61000-4-2(air)<br>IEC 61000-4-2(contact) | ESD       |     |     | 16<br>8 | kV            |
| Clamping voltage        | $I_{PP} = 1\text{A}, T_P = 8/20\mu\text{s}$  | $V_C$     |     |     | 47      | V             |
| Peak pulse power        | $T_P = 8/20\mu\text{s}$                      | $P_{PP}$  |     |     | 47      | W             |
| Operation temperature   |                                              | $T_J$     | -40 |     | 125     | °C            |
| Storage temperature     |                                              | $T_{STG}$ | -55 |     | 150     | °C            |

RATING AND CHARACTERISTIC CURVES (ACPDUC24V-HF)

Fig.1 - 8/20us Peak Pulse Current  
Waveform ACC. IEC 61000-4-5

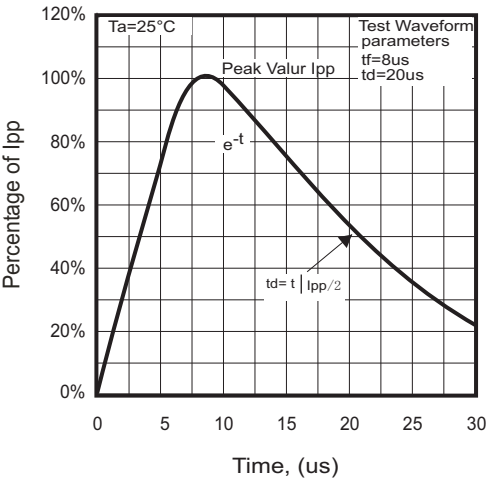


Fig.2 - Typical Capacitance Between  
Terminals Characteristics

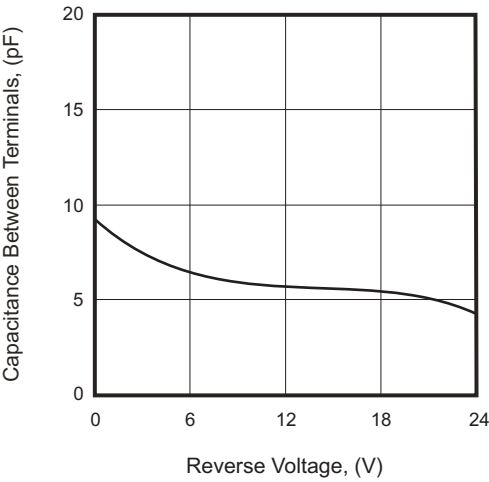


Fig. 3 - Reverse characteristics

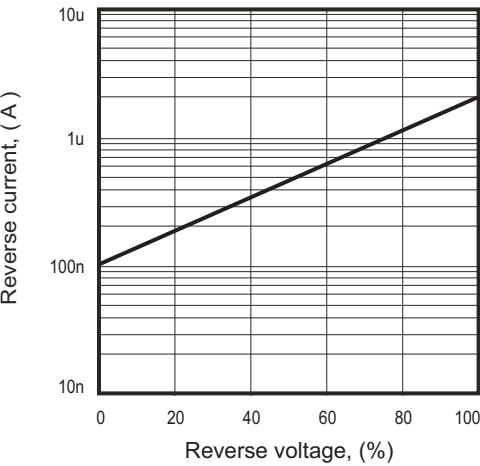
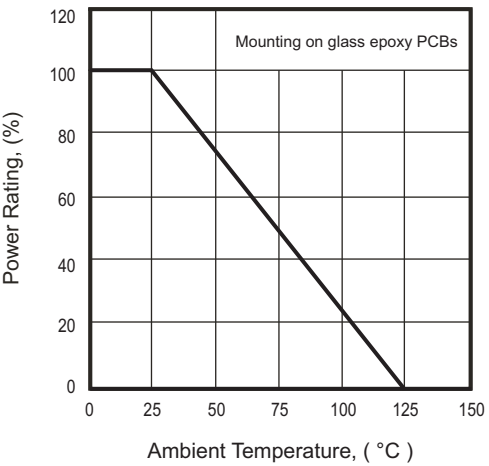
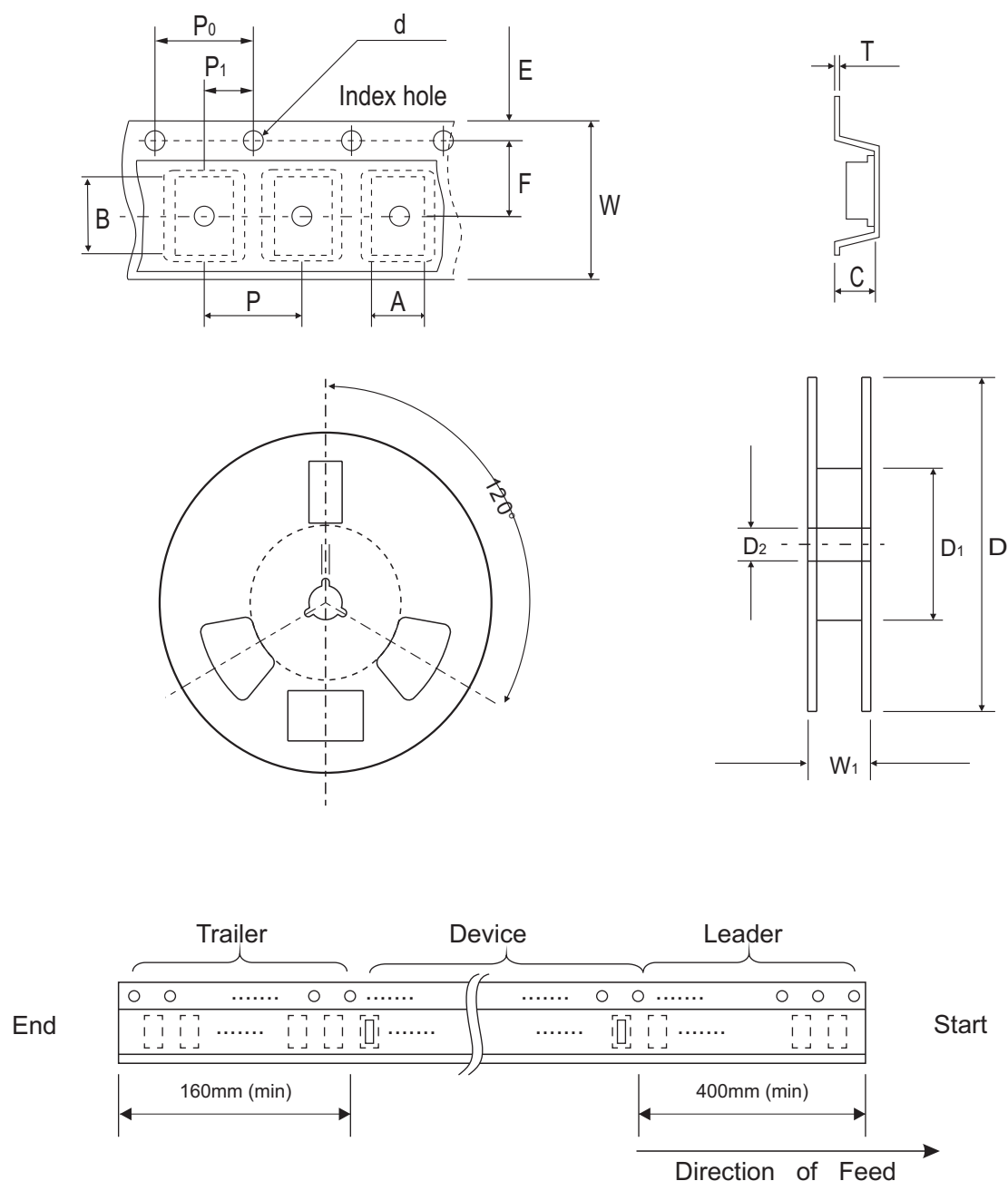


Fig.4 - Power Rating Derating Curve



## Reel Taping Specification



| 0603C/<br>SOD-523F | SYMBOL | A             | B             | C             | d                                     | D             | D <sub>1</sub> | D <sub>2</sub> |
|--------------------|--------|---------------|---------------|---------------|---------------------------------------|---------------|----------------|----------------|
|                    | (mm)   | 1.05 ± 0.05   | 1.96 ± 0.05   | 0.57 ± 0.05   | 1.50 <sup>+0.10</sup> <sub>-0</sub>   | 178.00 ± 1.00 | 60.00 ± 0.50   | 13.50 ± 0.20   |
|                    | (inch) | 0.041 ± 0.002 | 0.077 ± 0.002 | 0.022 ± 0.002 | 0.059 <sup>+0.004</sup> <sub>-0</sub> | 7.008 ± 0.039 | 2.362 ± 0.020  | 0.531 ± 0.008  |

| 0603C/<br>SOD-523F | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T             | W             | W <sub>1</sub>                        |
|--------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|---------------------------------------|
|                    | (mm)   | 1.75 ± 0.10   | 3.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.05    | 2.00 ± 0.05    | 0.20 ± 0.03   | 8.00 ± 0.20   | 12.00 <sup>+0.50</sup> <sub>-0</sub>  |
|                    | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.002  | 0.079 ± 0.002  | 0.008 ± 0.001 | 0.315 ± 0.008 | 0.472 <sup>+0.020</sup> <sub>-0</sub> |

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

REV:A

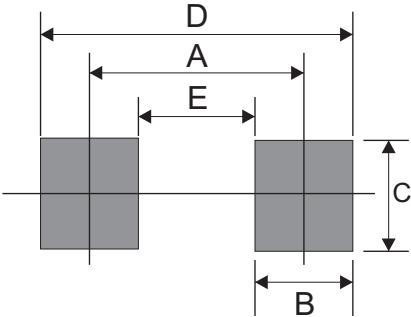
Marking Code

| Part Number  | Marking Code |
|--------------|--------------|
| ACPDUC24V-HF | E24          |



Suggested PAD Layout

| SIZE | 0603C/SOD-523F |        |
|------|----------------|--------|
|      | (mm)           | (inch) |
| A    | 1.10           | 0.043  |
| B    | 0.70           | 0.028  |
| C    | 1.00           | 0.039  |
| D    | 1.80           | 0.071  |
| E    | 0.40           | 0.016  |



Standard Packaging

| Case Type      | REEL PACK       |                     |
|----------------|-----------------|---------------------|
|                | REEL<br>( pcs ) | Reel Size<br>(inch) |
| 0603C/SOD-523F | 4,000           | 7                   |