

## FEATURES

- | 350W Peak Pulse Power per Line (tp=8/20μs)
- | Protects one power or I/O Port
- | Low Clamping Voltage
- | Low leakage current

## APPLICATIONS

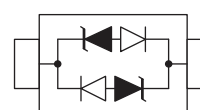
- | Ethernet-10/100/1000 Base T
- | Cellular phones
- | I<sup>2</sup>C Bus Protection
- | Parallel & Serial Port Protection
- | Personal Digital Assistant (PDA)
- | Microcontroller Input Protection
- | WAN/LAN Equipment



SOD-323



Marking



Schematic Symbol

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

## APPROVALS

|             |                                    |
|-------------|------------------------------------|
| <b>RoHS</b> | Compliance with 2011/65/EU         |
| <b>HF</b>   | Compliance with IEC61249-2-21:2003 |

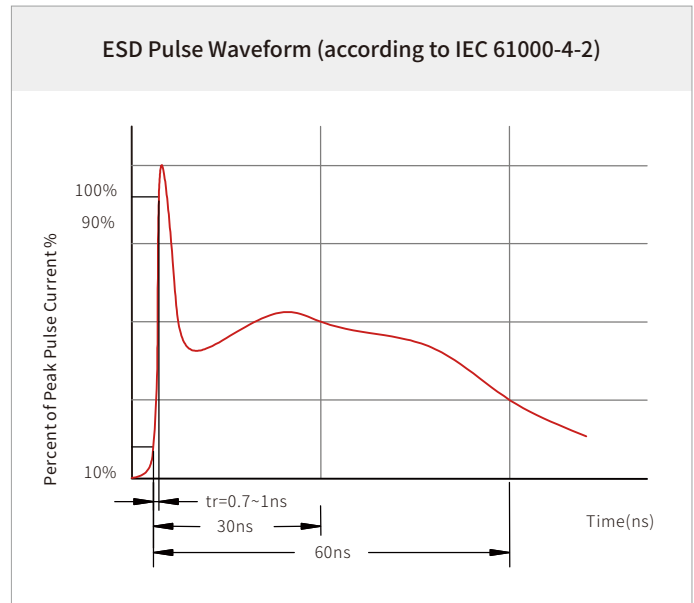
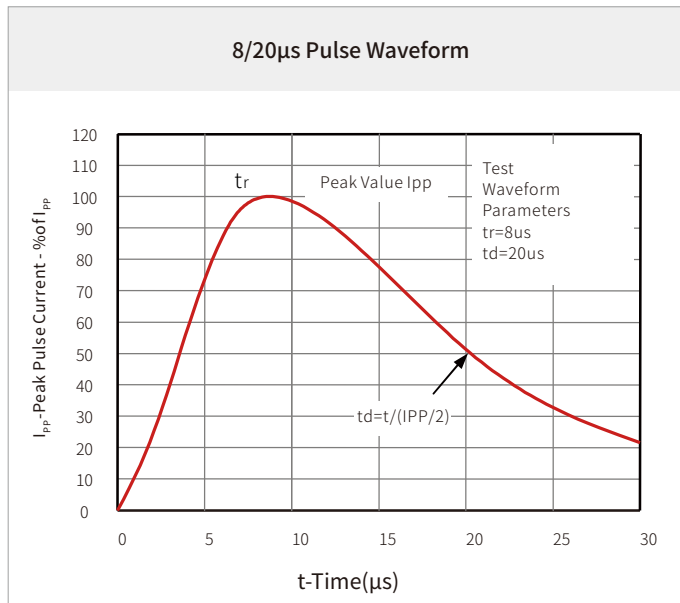
## THERMAL CONSIDERATIONS

| Symbol    | Parameter                             | Value       | Unit  |
|-----------|---------------------------------------|-------------|-------|
| $P_{PP}$  | Peak Pulse Power (tp=8/20μs waveform) | 350         | Watts |
| $T_J$     | Operating Temperature Range           | -55 to +150 | °C    |
| $T_{STG}$ | Storage Temperature Range             | -55 to +150 | °C    |

## ELECTRICAL CHARACTERISTICS

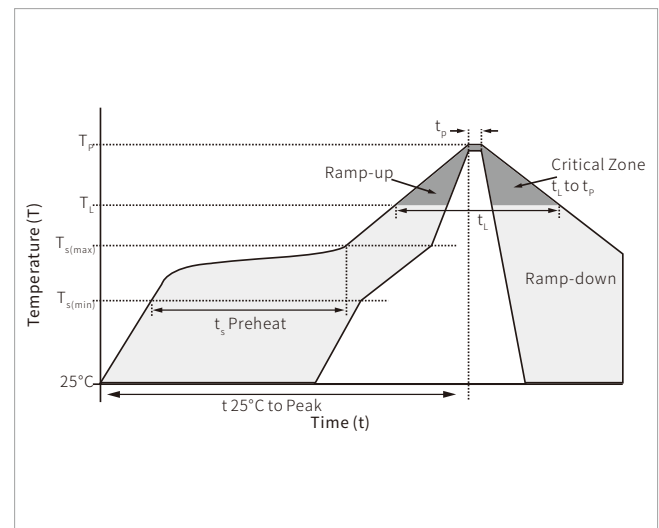
| Symbol    | Parameter                      | Condition                  | Min. | Typ. | Max. | Unit |
|-----------|--------------------------------|----------------------------|------|------|------|------|
| $V_{RWM}$ | Reverse Stand-off Voltage      |                            |      |      | 3.3  | V    |
| $V_{BR}$  | Reverse Breakdown Voltage      | $I_T=1mA$                  | 3.6  |      |      | V    |
| $I_R$     | Reverse Leakage Current        | $V_{RWM}=3.3V$             |      |      | 0.1  | μA   |
| $V_C$     | Clamping Voltage               | $I_{PP}=1A, tp=8/20\mu s$  |      |      | 7    | V    |
| $V_C$     | Clamping Voltage               | $I_{PP}=20A, tp=8/20\mu s$ |      |      | 16   | V    |
| $I_{PP}$  | Peak Pulse Current             | $tp=8/20\mu s$             |      |      | 20   | A    |
| $C_J$     | Off State Junction Capacitance | $V_R=0V, f=1MHz$           |      | 0.6  |      | pF   |

## CHARACTERISTIC CURVES

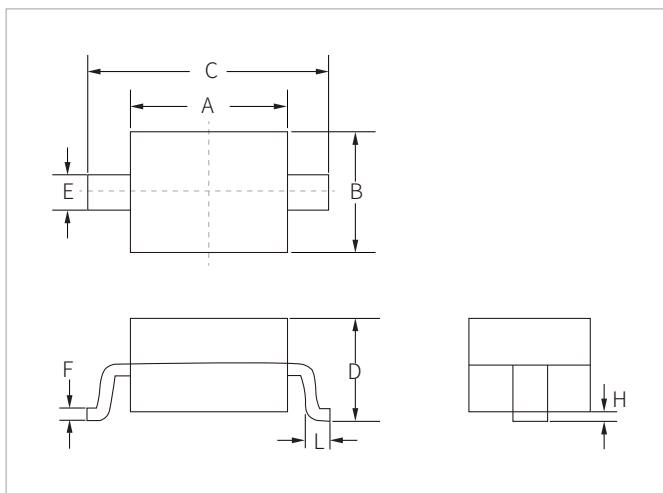


## SOLDERING PARAMETERS

| Reflow Condition                                       |                                      | Lead-free assembly |
|--------------------------------------------------------|--------------------------------------|--------------------|
| Pre Heat                                               | Temperature Max ( $T_{s(min)}$ )     | 150°C              |
|                                                        | Temperature Max ( $T_{s(max)}$ )     | 200°C              |
|                                                        | Time (min to max) ( $t_s$ )          | 60 – 180 secs      |
| Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak) |                                      | 3°C/second max     |
| Reflow                                                 | $T_{s(max)}$ to $T_L$ - Ramp-up Rate | 3°C/second max     |
|                                                        | Temperature ( $T_L$ ) (Liquidus)     | 217°C              |
|                                                        | Time (min to max) ( $t_L$ )          | 60 – 150 seconds   |
| Peak Temperature ( $T_p$ )                             |                                      | 260°C              |
| Time within 5°C of actual peak Temperature ( $t_p$ )   |                                      | 20 – 40 seconds    |
| Ramp-down Rate                                         |                                      | 6°C/second max     |
| Time 25°C to peak Temperature ( $T_p$ )                |                                      | 8 minutes max.     |
| Do not exceed                                          |                                      | 260°C              |

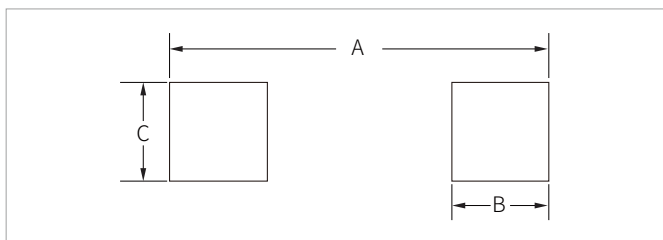


## SOD-323 PACKAGE INFORMATION



| Ref. | Millimeters |      | Inches |       |
|------|-------------|------|--------|-------|
|      | Min.        | Max. | Min.   | Max.  |
| A    | 1.60        | 1.90 | 0.063  | 0.075 |
| B    | 1.15        | 1.45 | 0.045  | 0.057 |
| C    | 2.35        | 2.75 | 0.093  | 0.108 |
| D    | 0.80        | 1.10 | 0.031  | 0.043 |
| E    | 0.25        | 0.40 | 0.010  | 0.016 |
| F    | 0.10        | 0.20 | 0.004  | 0.008 |
| H    | -           | 0.10 | -      | 0.004 |
| L    | 0.20        | 0.40 | 0.008  | 0.016 |

## RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters |      | Inches |       |
|------|-------------|------|--------|-------|
|      | Min.        | Max. | Min.   | Max.  |
| A    | 2.87        | 3.12 | 0.113  | 0.123 |
| B    | 0.66        | 0.91 | 0.026  | 0.036 |
| C    | 0.66        | 0.91 | 0.026  | 0.036 |

## ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|-------------|-------------------|----------|-----------|
| GBLC03CI    | SOD-323           | 3000PCS  | 7"        |

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