

## FEATURES

- | 350W Peak Pulse Power per Line (tp=8/20μs)
- | Protects two Bidirectional lines
- | Low clamping voltage
- | Working voltages : 24 V
- | Low Leakage current

## APPLICATIONS

- | Cellular Phone Handsets and Accessories
- | Microprocessor based equipment
- | Personal Digital Assistants (PDA' s)
- | Notebooks,Desktops,and Servers
- | Portable Inserumentation
- | Networking and Telecom
- | Servers and Parallel Ports
- | Peripherals



SOT-23



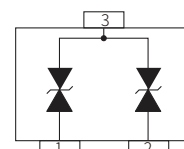
Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±15kV (air), ±8kV (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 |



Schematic Symbol

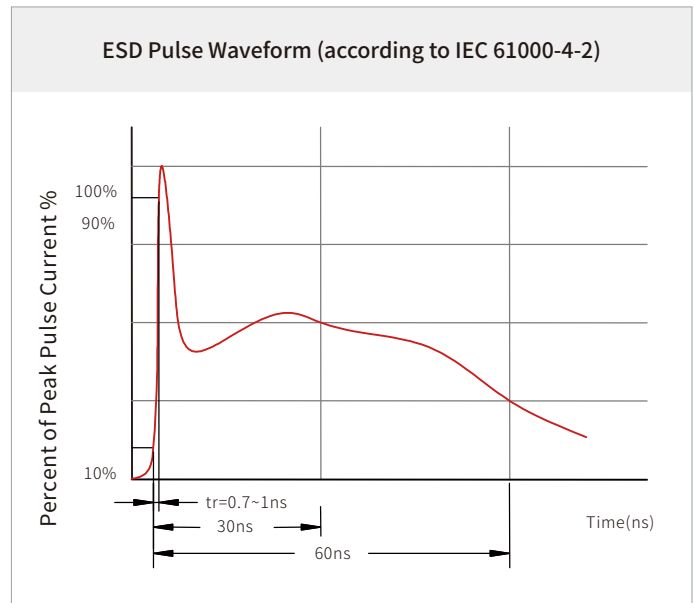
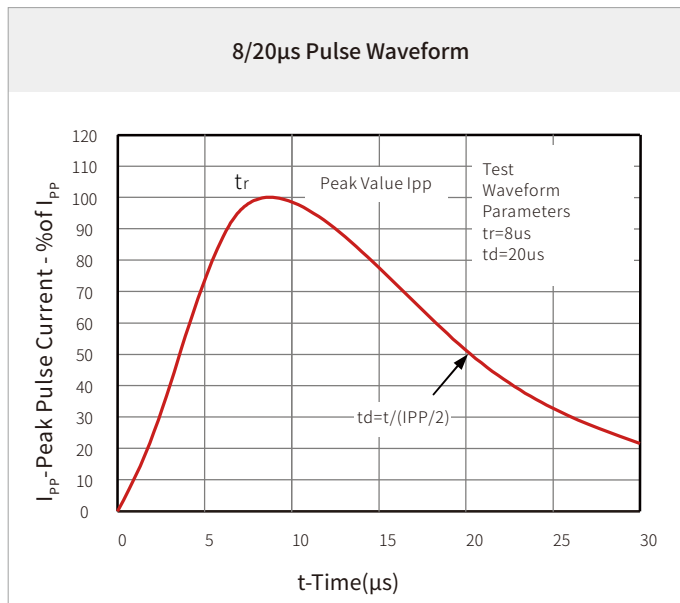
## THERMAL CONSIDERATIONS

| 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

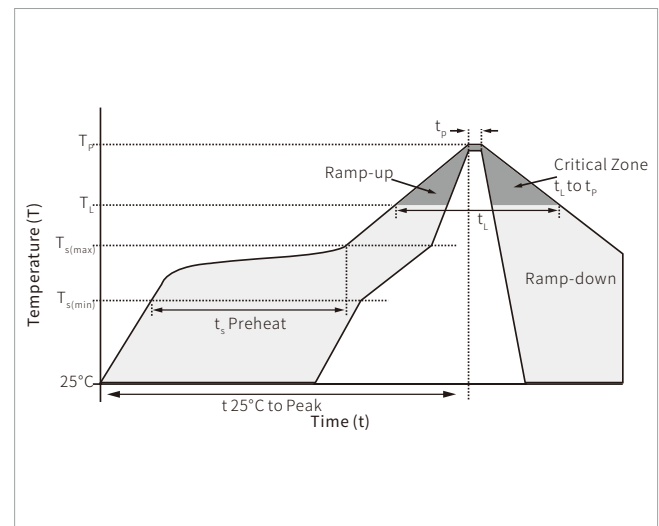
| Symbol    | Parameter                      | Condition                 | Min. | Typ. | Max. | Unit |
|-----------|--------------------------------|---------------------------|------|------|------|------|
| $V_{RWM}$ | Reverse Stand-off Voltage      |                           |      |      | 24   | V    |
| $V_{BR}$  | Reverse Breakdown Voltage      | $I_T=1mA$                 | 26.7 |      |      | V    |
| $I_R$     | Reverse Leakage Current        | $V_{RWM}=24V$             |      |      | 1    | μA   |
| $V_C$     | Clamping Voltage               | $I_{PP}=1A, tp=8/20\mu s$ |      |      | 43   | V    |
| $V_C$     | Clamping Voltage               | $I_{PP}=7A, tp=8/20\mu s$ |      |      | 52   | V    |
| $I_{PP}$  | Peak Pulse Current             | $tp=8/20\mu s$            |      |      | 7    | A    |
| $C_J$     | Off State Junction Capacitance | $V_R=0V, f=1MHz$          |      | 50   |      | pF   |

## CHARACTERISTIC CURVES

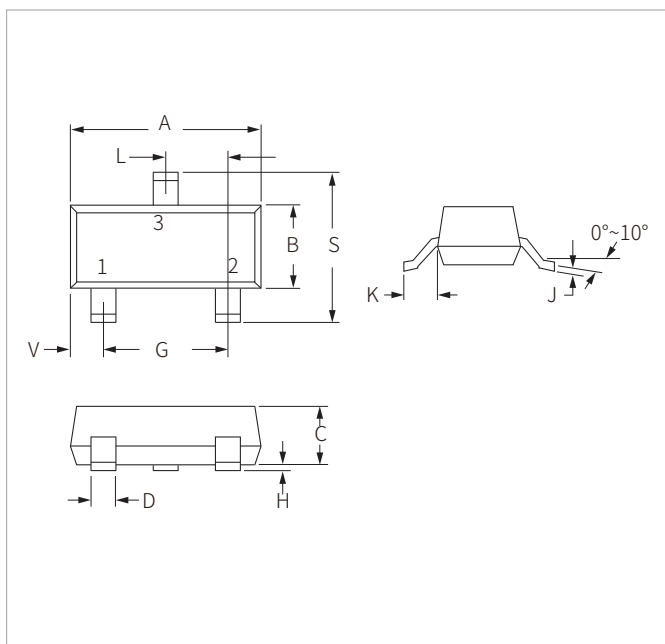


## SOLDERING PARAMETERS

| 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     |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate                   |                                  | 3°C/second max     |
| Reflow                                                 | 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              |

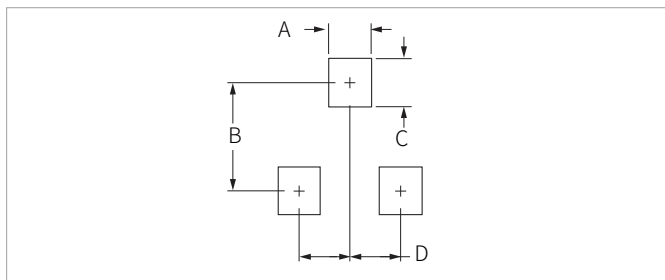


## SOT-23 PACKAGE INFORMATION



| Ref. | Millimeters |       | Inches |       |
|------|-------------|-------|--------|-------|
|      | Min.        | Max.  | Min.   | Max.  |
| A    | 2.80        | 3.05  | 0.110  | 0.120 |
| B    | 1.20        | 1.40  | 0.047  | 0.055 |
| C    | 0.90        | 1.15  | 0.035  | 0.045 |
| D    | 0.37        | 0.50  | 0.015  | 0.020 |
| G    | 1.75        | 2.05  | 0.069  | 0.081 |
| H    | 0.01        | 0.100 | 0.001  | 0.004 |
| J    | 0.085       | 0.180 | 0.003  | 0.007 |
| K    | 0.35        | 0.69  | 0.014  | 0.029 |
| L    | 0.89        | 1.02  | 0.035  | 0.040 |
| S    | 2.10        | 2.65  | 0.083  | 0.104 |
| V    | 0.45        | 0.60  | 0.018  | 0.024 |

## RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters |      | Inches |       |
|------|-------------|------|--------|-------|
|      | Min.        | Max. | Min.   | Max.  |
| A    | 0.71        | 0.97 | 0.028  | 0.038 |
| B    | 1.88        | 2.13 | 0.074  | 0.084 |
| C    | 0.71        | 0.97 | 0.028  | 0.038 |
| D    | 0.81        | 1.07 | 0.032  | 0.042 |

## ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|-------------|-------------------|----------|-----------|
| SE23T35B24B | SOT-23            | 3000PCS  | 7"        |

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