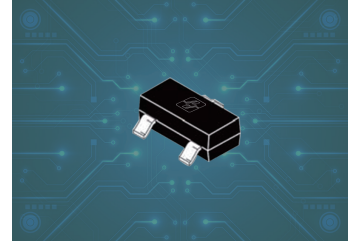


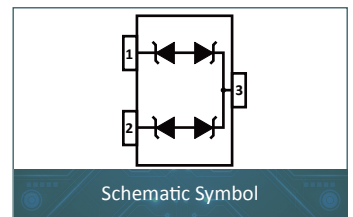
1. FEATURES

- 400W Peak Pulse Power per Line (tp=8/20μs)
- Protects two +12V to -7V lines
- Low clamping voltage
- RoHS Compliant
- Moisture sensitivity level: Level 1
- Weight 8 Milligrams (Approximate)



2. APPLICATIONS

- Protection of RS-485 transceivers with extended common-mode range
- Security systems
- Automatic Teller Machines
- HFC systems
- Networks



3. IEC COMPATIBILITY

- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning) 17A (8/20μs)

4. THERMAL CONSIDERATIONS

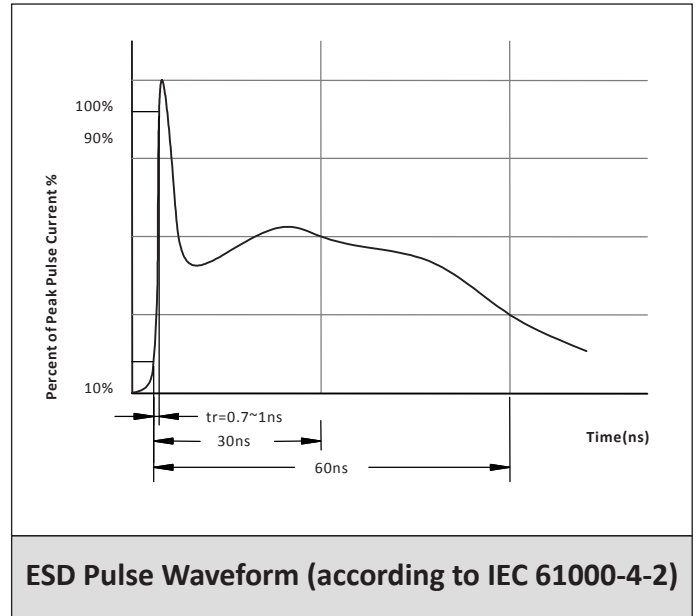
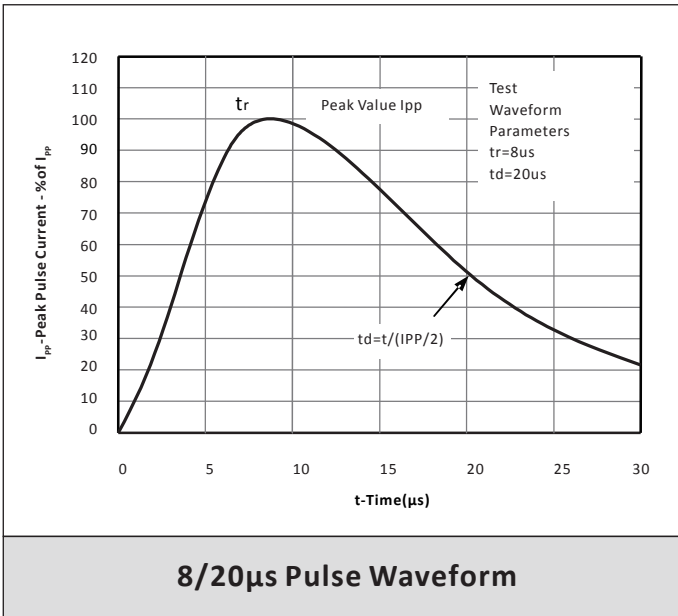
| Symbol | Parameter | Value | Unit |
|-----------|---------------------------------------|--------------|-------|
| P_{PP} | Peak Pulse Power (tp=8/20μs waveform) | 400 | Watts |
| T_J | Operating Temperature Range | -55 to +150 | °C |
| T_{STG} | Storage Temperature Range | -55 to +150 | °C |
| T_L | Lead Soldering Temperature | 260(10 sec.) | °C |

5. ELECTRICAL CHARACTERISTICS

| Part Number | Device Marking Code | V_{RWM} | V_{BR} | I_T | $V_C@5A$ | V_C | | I_R | C_T |
|-------------------|---------------------|-----------|----------|-------|----------|---------|------|----------|----------|
| | | Max.(V) | Min.(V) | (mA) | Max.(V) | Max.(V) | @A | Max.(uA) | Max.(pF) |
| Pin 3-1 & Pin 3-2 | 712 | 7.0 | 7.5 | 1.0 | 10.0 | 12.0 | 17.0 | 10.0 | 55.0 |
| Pin 1-3 & Pin 2-3 | 712 | 12.0 | 13.3 | 1.0 | 20.0 | 26.0 | 17.0 | 1.0 | 55.0 |

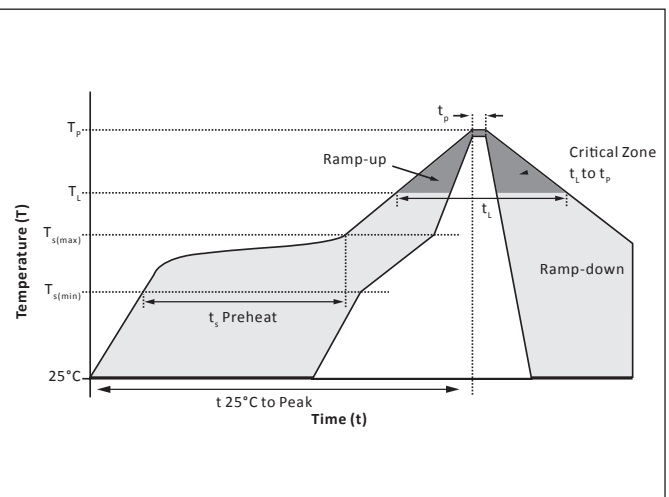


6. CHARACTERISTIC CURVES



7. 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_r) | 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 |



8. SOT-23 PACKAGE INFORMATION

| DIM | Millimeters | | Inches | |
|-----|-------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.80 | 3.04 | 0.110 | 0.120 |
| B | 1.20 | 1.40 | 0.047 | 0.055 |
| C | 0.89 | 1.11 | 0.035 | 0.044 |
| D | 0.37 | 0.50 | 0.015 | 0.020 |
| G | 1.78 | 2.04 | 0.070 | 0.081 |
| H | 0.013 | 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 | 2.64 | 0.083 | 0.104 |
| V | 0.45 | 0.60 | 0.018 | 0.024 |

9. RECOMMENDED PAD LAYOUT DIMENSIONS

| DIM | 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 |

10. ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|-------------|-------------------|----------|-----------|
| SESM712 | SOT-23 | 3000PCS | 7" |



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