SE10F10B5.0A

ElectroStatic Discharge Protection Device

DESCRIPTION

The SE10F10B5.0A is Bi-directional transientvoltage suppressor (TVS) to protect sensitive electronic components from electrostatic discharge(ESD). It is particularly well-suited for cellular phones, PMP, MID, PDA, digital cameras and other electronic equipments.

The SE10F10B5.0A is safely dissipating ESD strikesto meet the ESD immunity testing of IEC61000-4-2 level 4. The SE10F10B5.0A is available in a DFN1006 package with Pb-free.

FEATURES

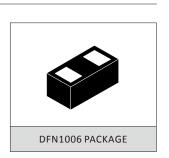
- > 174 Watts Peak Pulse Power per Line (tp=8/20µs)
- > Protects one bidirectional I/O line
- > Working voltages : 5.0V
- > Low leakage current

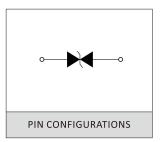
APPLICATIONS

- > Cell Phone Handsets and Accessories
- > Microprocessor based equipment
- > Personal Digital Assistants (PDA's)
- > Notebooks, Desktops, and Servers
- > Portable Instrumentation
- > Peripherals
- > Pagers

IEC COMPATIBILITY

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





MAXIMUM RATINGS AND CHARACTERISTICS Ratings at 25°C ambient temperature unless otherwise specified.

| RATING | SYMBOL | VALUE | UNITS |
|--|--------|----------|-------|
| Peak Pulse Power (tp=8/20μs waveform). | Рррм | 174 | Watts |
| Operating Temperature Range. | Τı | -55~+125 | °C |
| Storage Temperature Range. | Тѕтс | -55~+150 | °C |

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

ELECTRICAL CHARACTERISTICS

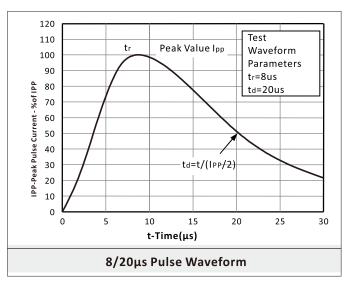
| Part Number | Device Marking Code | Reverse Stand-off Voltage Max. | Breakdown Voltage Min. | Test Current | Peak Pulse Current Typ.@5A | Pea Puls Curre | se | Junction Capacitance Typ. | Reverse Leakage Max. |
|----------------|---------------------------|---|------------------------------|-----------------|-------------------------------------|----------------------|----------|---------------------------------|----------------------------|
| | | Vrwm(V) | VBR (V) | Iτ(mA) | Vc(V) | Vc(' Max. | V) @A | CT(PF) | Ir(μ A) |
| SE10F10B5.0A | С | 5.00 | 5.6 | 1 | 11.6 | 18.6 | 9.4 | 15 | 0.5 |

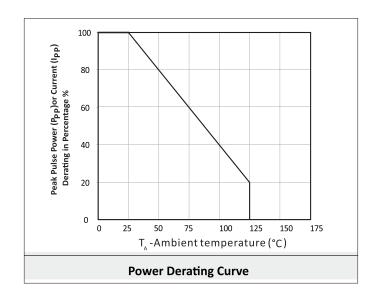


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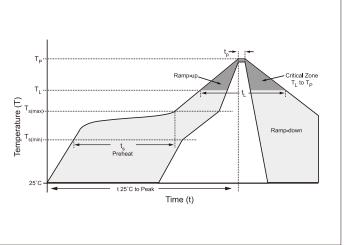
PRODUCT DIMENSIONS





REFLOW PROFILE

| | Reflow Condition | Lead-free assembly | |
|------------|--|--------------------|--|
| Pre Heat | Temperature Min (Ts(min)) | 150°C | |
| | Temperature Max (Ts(max) | 200°C | |
| | Time (min to max) (ts) | 60 – 180 secs | |
| Average ra | mp up rate (Liquidus Temp (TL) to peak | 3°C/second max | |
| - | Γs(max)to Τι - Ramp-up Rate | 3°C/second max | |
| Reflow | Temperature (TL) (Liquidus) | 217°C | |
| Kellow | Time (min to max) (tւ) | 60 – 150 seconds | |
| Peak Tem | perature (TP) | 260°C | |
| Time with | in 5°C of actual peak Temperature (tp) | 20 – 40 seconds | |
| Ramp-dov | vn Rate | 6°C/second max | |
| Time 25°C | to peak Temperature (TP) | 8 minutes Max. | |
| Do not exc | ceed | 260°C | |



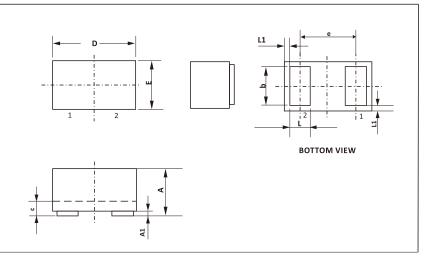


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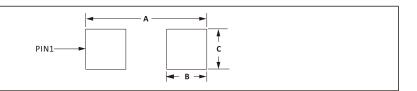
DFN1006 PACKAGE DIMENSIONS

| OUTLINEDIMENSIONS | | | | | |
|-------------------|-------|--------|--------|-------|--|
| DIM | MILLI | METERS | INCHES | | |
| | MIN | MAX | MIN | MAX | |
| Α | 0. 40 | 0.55 | 0.016 | 0.022 | |
| A1 | 0 | 0.05 | 0 | 0.002 | |
| b | 0.40 | 0.60 | 0.016 | 0.024 | |
| С | 0.12 | 0.18 | 0.005 | 0.007 | |
| D | 0.95 | 1.05 | 0.037 | 0.041 | |
| е | 0.65 | STYP | 0.026 | STYP | |
| Е | 0.55 | 0.65 | 0.022 | 0.026 | |
| L | 0.15 | 0.35 | 0.006 | 0.014 | |
| L1 | 0.0 | 5REF | 0.00 | 2REF | |



RECOMMENDED PAD LAYOUT DIMENSIONS

| DIM | MILLIMETERS | INCHES |
|-----|-------------|--------|
| Α | 1.20 | 0.047 |
| В | 0. 47 | 0.019 |
| С | 0. 60 | 0.024 |



ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|--------------|-------------------|----------|-----------|
| SE10F10B5.0A | DFN1006 | 10000PCS | 7" |



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