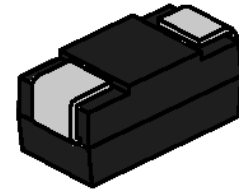


DESCRIPTION:

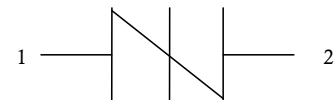
PxxxxTA series are a type of semiconduct component. They are designed to protect baseband equipment from damaging overvoltage transients.



SMA

FEATURES:

- ✧ Low profile package.
- ✧ Low on-state voltage.
- ✧ Excellent capability of absorbing transient surge.
- ✧ Quick response to surge voltage (ns Level).
- ✧ Eliminates overvoltage caused by fast rising transients.
- ✧ Moisture sensitivity level: Level 1.
- ✧ Non degenerative.



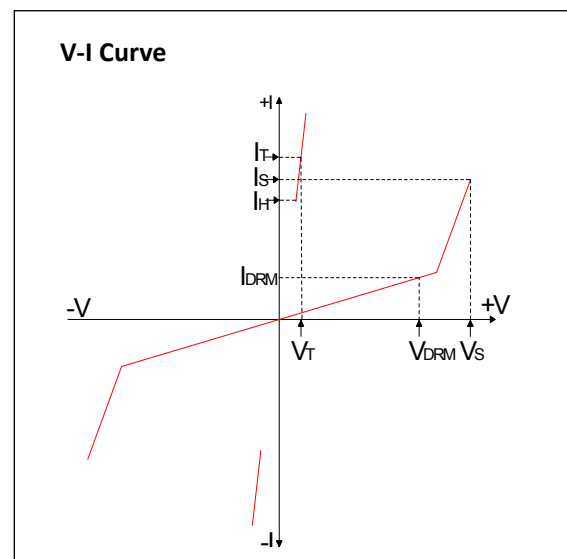
Symbol

ABSOLUTE MAXIMUM RATINGS($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--------------------------------------|-----------|-------------|--------------------|
| Storage temperature range | T_{STG} | -60 to +150 | $^{\circ}\text{C}$ |
| Operating junction temperature range | T_J | -40 to +125 | $^{\circ}\text{C}$ |
| Repetitive peak pulse current | I_{PP} | 35 | A |

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

| Symbol | Parameter |
|-----------|------------------------|
| V_{DRM} | Peak off-state voltage |
| I_{DRM} | Off-state current |
| V_S | Switching voltage |
| I_S | Switching current |
| V_T | On-state voltage |
| I_T | On-state current |
| I_H | Holding current |
| C_O | Off-state capacitance |



MARKING



P008A : Device Marking Code
1709: In ninth week, 2017

ELECTRICAL CHARACTERISTICS (T_A=25°C, continued)

| Part Number | I _{DRM} @V _{DRM} | | V _S ^① @I _S | | V _T @ I _T | | I _H | C _O ^② | Marking |
|-------------|------------------------------------|-----|---|-----|---------------------------------|-----|----------------|-----------------------------|---------|
| | μA | V | V | mA | V | A | mA | pF | |
| | max | min | max | max | max | max | min | max | |
| P0080TA | 1 | 6 | 15 | 800 | 4 | 2.2 | 50 | 30 | P008A |
| P0150TA | 1 | 12 | 35 | 800 | 4 | 2.2 | 45 | 125 | P015A |
| P0220TA | 1 | 15 | 35 | 800 | 4 | 2.2 | 50 | 100 | P022A |
| P0300TA | 1 | 25 | 40 | 800 | 4 | 2.2 | 50 | 100 | P030A |

① V_S is measured at 100KV/s

② Off-state capacitance is measured in V_{DC}=2V, V_{RMS}=1V, f=1MHz

SURGE RATINGS

| Series | I _{PP} (A) min | | | |
|--------|-------------------------|--------|----------|-----------|
| | 2×10μs | 8×20μs | 10×360μs | 10×1000μs |
| A | 100 | 90 | 50 | 35 |

ORDERING INFORMATION

| | | | | |
|----------------------------|----------------|-------------------------------------|------------------|-----------------------------|
| P | 008 | 0 | T | A |
| Series code P: SIDACtor | Median voltage | 0: Bi-direction 1: Uni-direction | Package type:SMA | Surge ratings:2KV(10/700μs) |

SOLDERING PARAMETERS

| | | |
|--|-----------------------------------|---------------------------------|
| Reflow Condition | | Pb-Free assembly (see FIG.2) |
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150°C |
| | -Temperature Max($T_{s(max)}$) | +200°C |
| | -Time (Min to Max) (ts) | 60-180 secs. |
| Average ramp up rate (Liquidus Temp (T_L) to peak) | | 3°C/sec. Max |
| $T_{s(max)}$ to T_L - Ramp-up Rate | | 3°C/sec. Max |
| Reflow | -Temperature(T_L) (Liquidus) | +217°C |
| | -Temperature(t_L) | 60-150 secs. |
| Peak Temp (T_p) | | +260(+0/-5)°C |
| Time within 5°C of actual Peak Temp (t_p) | | 30secs. Max |
| Ramp-down Rate | | 6°C/sec. Max |
| Time 25°C to Peak Temp (T_P) | | 8 min. Max |
| Do not exceed | | +260°C |

FIG.1: tr × td pulse waveform

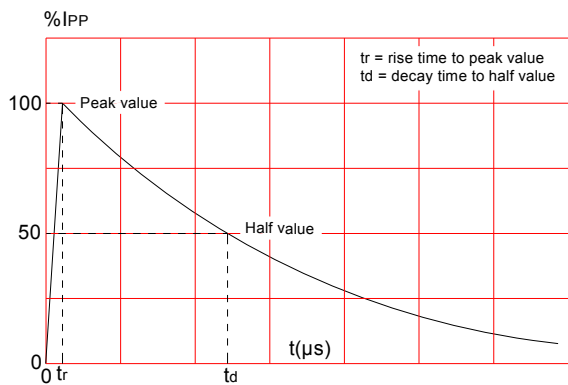


FIG.3: Normalized V_s change vs. junction temperature

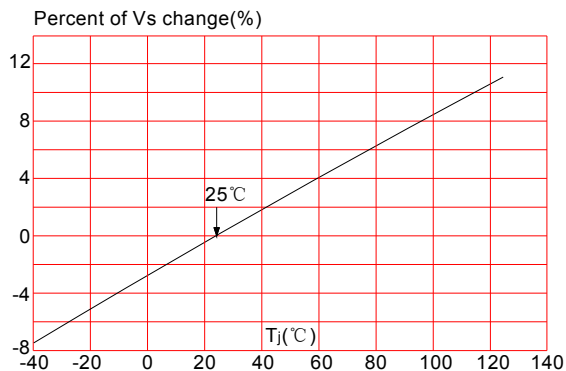


FIG.2: Reflow condition

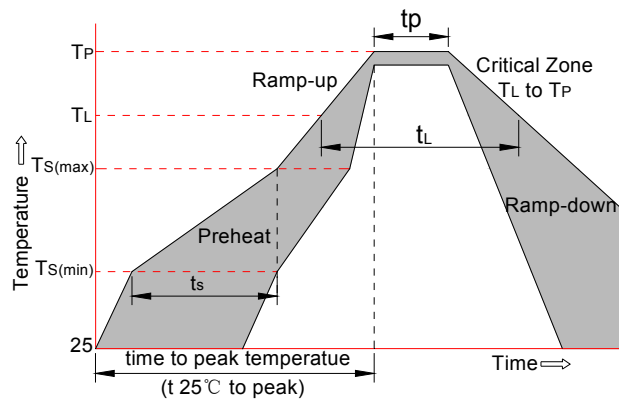
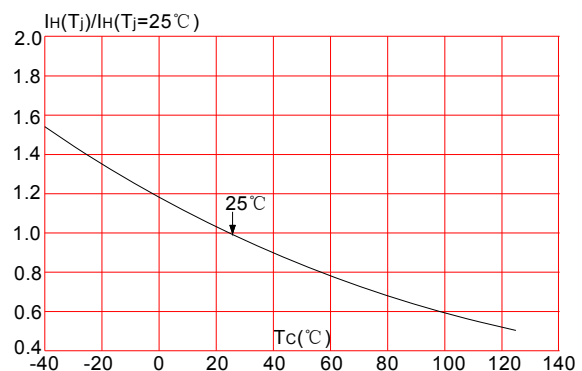
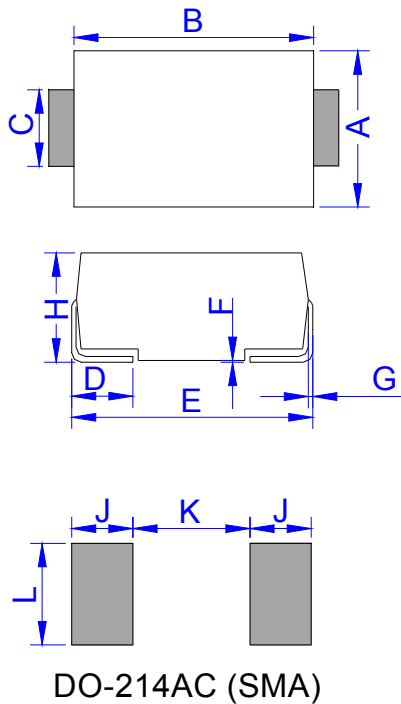


FIG.4: Normalized DC holding current vs. case temperature

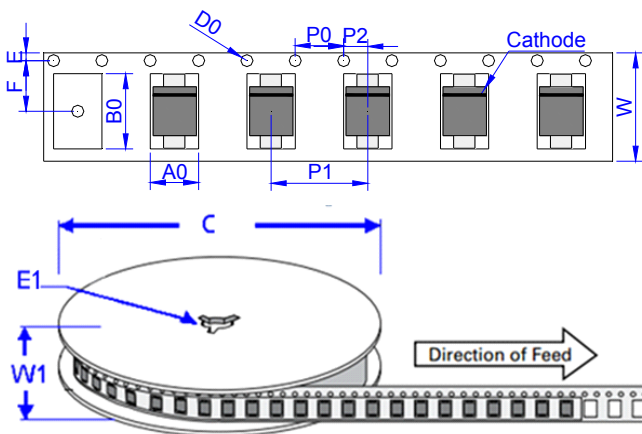


PACKAGE MECHANICAL DATA



| Ref. | Dimensions | | | |
|------|-------------|-------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 2.60 | 3.00 | 0.102 | 0.118 |
| B | 4.15 | 4.65 | 0.163 | 0.183 |
| C | 1.25 | 1.65 | 0.049 | 0.065 |
| D | 0.95 | 1.52 | 0.037 | 0.060 |
| E | 4.90 | 5.30 | 0.193 | 0.209 |
| F | 0.051 | 0.203 | 0.002 | 0.008 |
| G | 0.15 | 0.31 | 0.006 | 0.012 |
| H | 2.00 | 2.44 | 0.079 | 0.096 |
| J | 2.00 | | 0.079 | |
| K | | 2.30 | | 0.091 |
| L | 1.80 | | 0.071 | |

TAPE AND REEL SPECIFICATION-SMA



| Ref. | Dimensions | |
|------|-------------|---------------|
| | Millimeters | Inches |
| A0 | 2.79 ± 0.3 | 0.110 ± 0.012 |
| B0 | 5.33 ± 0.3 | 0.210 ± 0.012 |
| C | 330.0 | 13.0 |
| D0 | 1.55 ± 0.1 | 0.061 ± 0.004 |
| E | 1.75 ± 0.2 | 0.069 ± 0.008 |
| E1 | 13.3 ± 0.3 | 0.524 ± 0.012 |
| F | 5.5 ± 0.2 | 0.217 ± 0.008 |
| P0 | 4.00 ± 0.2 | 0.157 ± 0.008 |
| P1 | 4.00 ± 0.2 | 0.157 ± 0.008 |
| P2 | 2.00 ± 0.2 | 0.079 ± 0.008 |
| W | 12.0 ± 0.2 | 0.472 ± 0.008 |
| W1 | 15.7 ± 2.0 | 0.618 ± 0.079 |

| OUTLINE | UNIT WEIGHT (g/PCS) typ. | REEL (PCS) | PER CARTON (PCS) | REEL DIAMETERS (mm) |
|---------|--------------------------|------------|------------------|---------------------|
| TAPING | 0.069 | 5,000 | 80,000 | 330 |