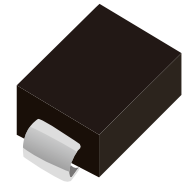
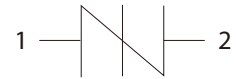


FEATURES

- | Excellent capability of absorbing transient surge
- | Quick response to surge voltage
- | Eliminates over voltage caused by fast rising transients
- | Solid-state silicon technology, non degenerative



SMB(DO-214AA)



Schematic Symbol

APPLICATIONS

- | Audio/Video line
- | Network and telecom
- | Data lines and security systems
- | Serial ports

APPROVALS

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

ELECTRICAL CHARACTERISTICS

| Part Number | Marking | V_{DRM} | V_S | V_T | I_{DRM} | I_S | I_T | I_H | C_o |
|-------------|---------|-----------|----------|----------|-----------------|-------|----------|-----------|----------|
| | | Min. (V) | Max. (V) | Max. (V) | Max. (μ A) | mA | Max. (A) | Min. (mA) | Typ.(pF) |
| P0060SA | P006A | 6 | 15 | 4 | 5 | 800 | 2.2 | 40 | 50 |
| P0080SA | P008A | 6 | 25 | 4 | 5 | 800 | 2.2 | 40 | 50 |
| P0150SA | P015A | 15 | 25 | 4 | 5 | 800 | 2.2 | 40 | 50 |
| P0300SA | P03A | 25 | 40 | 4 | 5 | 800 | 2.2 | 40 | 70 |
| P0640SA | P06A | 58 | 77 | 4 | 5 | 800 | 2.2 | 120 | 50 |
| P0720SA | P07A | 65 | 88 | 4 | 5 | 800 | 2.2 | 120 | 50 |
| P0900SA | P09A | 75 | 98 | 4 | 5 | 800 | 2.2 | 120 | 45 |
| P1100SA | P11A | 90 | 130 | 4 | 5 | 800 | 2.2 | 120 | 45 |
| P1300SA | P13A | 120 | 160 | 4 | 5 | 800 | 2.2 | 120 | 45 |
| P1500SA | P15A | 140 | 180 | 4 | 5 | 800 | 2.2 | 120 | 40 |
| P1800SA | P18A | 170 | 220 | 4 | 5 | 800 | 2.2 | 120 | 40 |
| P2300SA | P23A | 190 | 260 | 4 | 5 | 800 | 2.2 | 120 | 35 |
| P2600SA | P26A | 220 | 300 | 4 | 5 | 800 | 2.2 | 120 | 35 |
| P3100SA | P31A | 275 | 350 | 4 | 5 | 800 | 2.2 | 120 | 30 |
| P3500SA | P35A | 320 | 400 | 4 | 5 | 800 | 2.2 | 120 | 30 |
| P4200SA | P42A | 400 | 520 | 4 | 5 | 800 | 2.2 | \leq 50 | 30 |

SURGE RATINGS

| Part Number | I_{PP} 2x10us | I_{PP} 8x20us | I_{PP} 10x560us | I_{PP} 10x1000us | V_{PP} 10x700us | I_{TSM} 60Hz | d_i/d_t |
|----------------------|--------------------|--------------------|----------------------|-----------------------|----------------------|-------------------|-----------|
| | (A) | (A) | (A) | (A) | (V) | (A) | (A/us) |
| P0060SA Thru P4200SA | 150 | 150 | 100 | 50 | 3000 | 20 | 500 |

THERMAL CONSIDERATIONS

| Symbol | Parameter | Value | Unit |
|-----------------|----------------------------------------|-------------|------|
| $R_{\theta JA}$ | Junction to Ambient on printed circuit | 90 | °C/W |
| T_J | Operating Junction Temperature | -55 to +150 | °C |
| T_{STG} | Storage Temperature Range | -55 to +150 | °C |

RATINGS AND CHARACTERISTIC CURVES ($T_A=25^\circ\text{C}$)





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 |

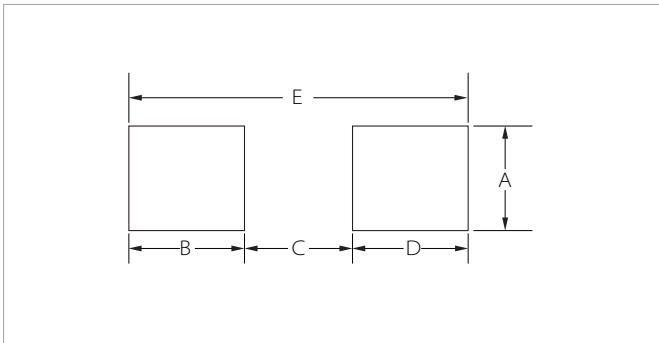


DO-214AA(SMB) PACKAGE INFORMATION



| Ref. | Millimeters | | Inches | |
|------|-------------|------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 1.80 | 2.20 | 0.071 | 0.087 |
| B | 4.30 | 4.70 | 0.170 | 0.185 |
| C | 3.40 | 3.90 | 0.134 | 0.153 |
| D | 2.15 | 2.55 | 0.085 | 0.100 |
| E | 1.00 | 1.50 | 0.039 | 0.059 |
| F | 0.02 | 0.20 | 0.001 | 0.008 |
| G | 5.10 | 5.50 | 0.200 | 0.216 |
| H | 0.15 | 0.30 | 0.006 | 0.012 |

RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters | | Inches | |
|------|-------------|------|----------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.20 | - | 0.087 | - |
| B | 1.45 | - | 0.057 | - |
| C | - | 2.55 | - | 0.010 |
| D | 1.45 | - | 0.057 | - |
| E | 5.60REF | | 0.220REF | |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|-------------|-------------------|----------|-----------|
| PxxxxSA | DO-214AA(SMB) | 3000PCS | 13" |

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