

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



SMA(DO-214AC)



Marking



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 | 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) |
| STA45B75 | 75.0 | 98.0 | 4.0 | 5.0 | 800.0 | 2.2 | 120.0 | 45.0 |

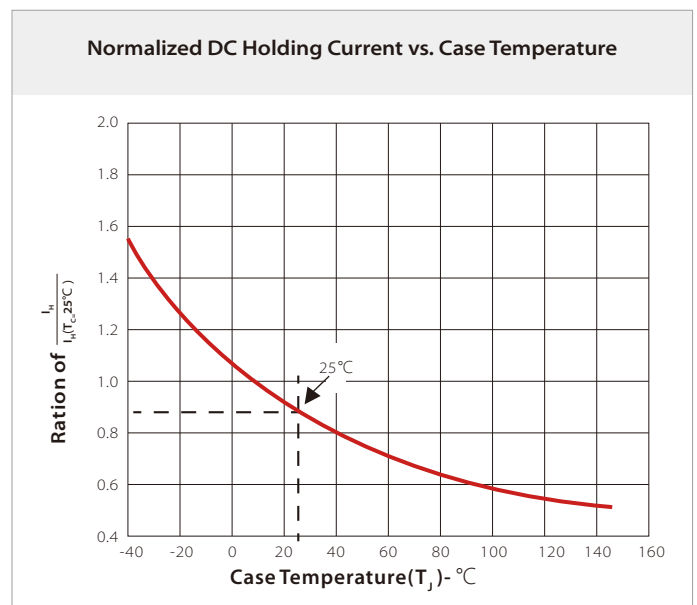
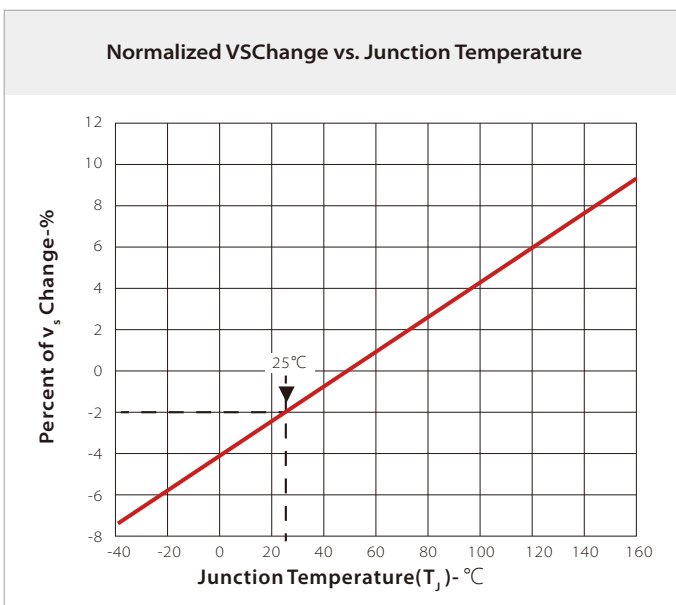
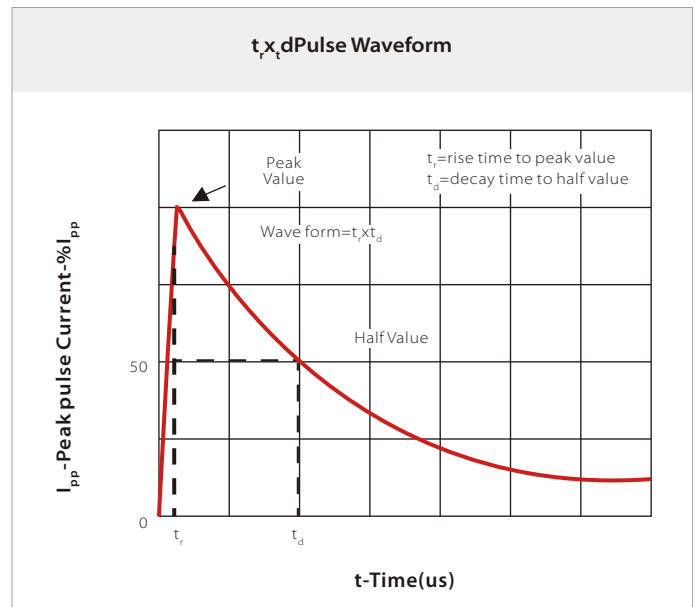
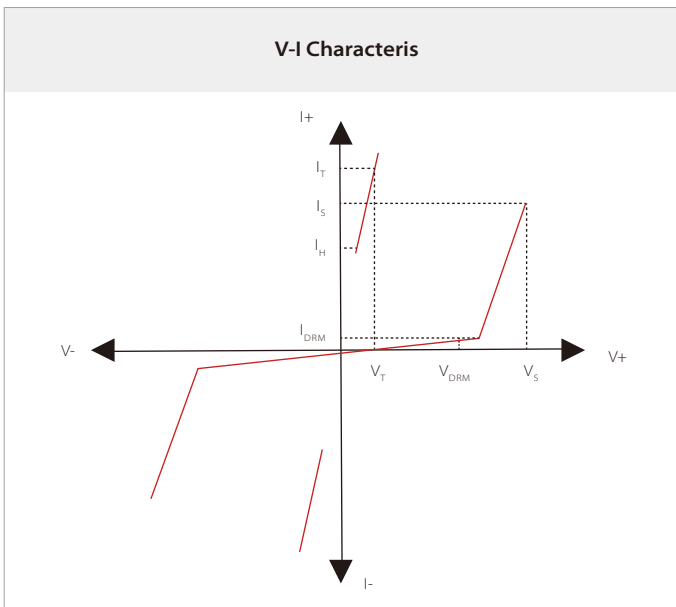
SURGE RATINGS

| Part Number | I_{PP} 2x10us | I_{PP} 8x20us | I_{PP} 10x560us | I_{PP} 10x1000us | V_{PP} 10x700us | I_{TSM} 60Hz | d_t/d_t |
|-------------|--------------------|--------------------|----------------------|-----------------------|----------------------|-------------------|-----------|
| | (A) | (A) | (A) | (A) | (V) | (A) | (A/us) |
| STA45B75 | 150 | 150 | 50 | 45 | 3000 | 20 | 500 |

THERMAL CONSIDERATIONS

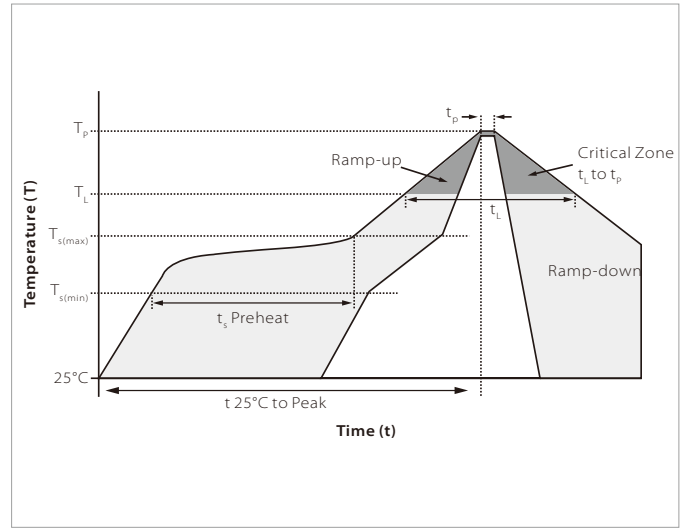
| Symbol | Parameter | Value | Unit |
|-----------------|--|-------------|------|
| $R_{\theta JA}$ | Junction to Ambient on printed circuit | 120 | C/W |
| T_J | Operating Junction Temperature | -55 to +150 | C |
| T_{STG} | Storage Temperature Range | -55 to +150 | C |

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

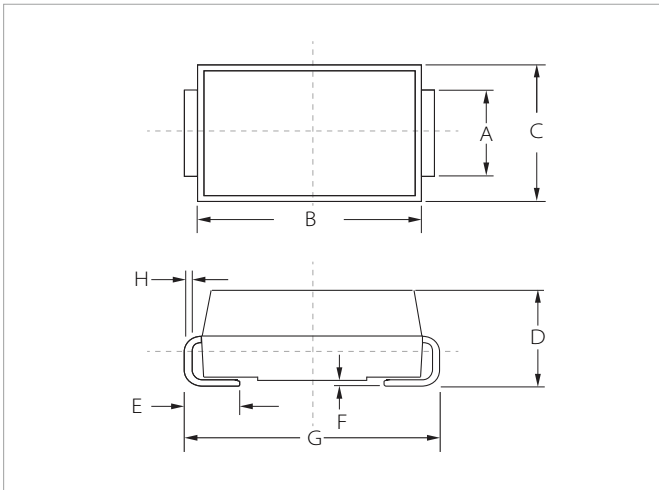


SOLDERING PARAMETERS

| 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_p) | 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 |

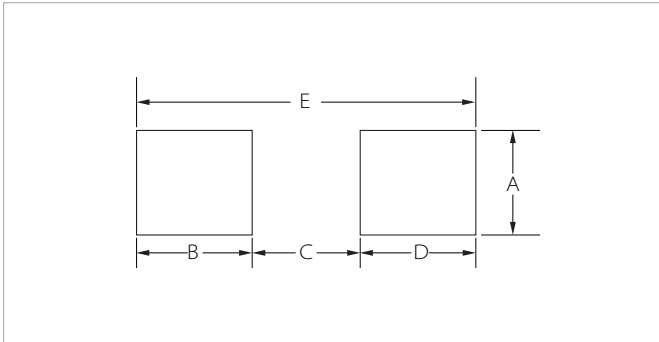


DO-214AC(SMA) PACKAGE INFORMATION



| Ref. | Millimeters | | Inches | |
|------|-------------|------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 1.20 | 1.60 | 0.047 | 0.063 |
| B | 4.20 | 4.60 | 0.165 | 0.181 |
| C | 2.60 | 2.80 | 0.102 | 0.110 |
| D | 2.10 | 2.40 | 0.083 | 0.094 |
| E | 0.76 | 1.52 | 0.030 | 0.060 |
| F | 0.02 | 0.20 | 0.001 | 0.008 |
| G | 4.85 | 5.25 | 0.191 | 0.207 |
| H | 0.15 | 0.30 | 0.006 | 0.012 |

RECOMMENDED PAD LAYOUT DIMENSIONS



| Ref. | Millimeters | | Inches | |
|------|-------------|------|----------|-------|
| | Min. | Max. | Min. | Max. |
| A | 1.63 | - | 0.064 | - |
| B | 1.45 | - | 0.057 | - |
| C | - | 2.80 | - | 0.090 |
| D | 1.45 | - | 0.057 | - |
| E | 5.28REF | | 0.208REF | |

ORDERING INFORMATION

| Part Number | Component Package | QTY/Reel | Reel Size |
|-------------|-------------------|----------|-----------|
| STA45B75 | DO-214AC(SMA) | 5000PCS | 13" |

Headquarters

No.3387 Shendu Road Pujiang
I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

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Website



Wechat

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