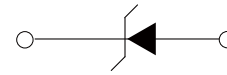


## FEATURES

- | Low profile package
- | Ideal for automated placement
- | 400 Watt peak pulse power capability with a 10/1000 $\mu$ s waveform
- | For surface mounted applications to optimize board space
- | Excellent clamping capability
- | Very fast response time
- | Low incremental surge resistance



DO-214AC(SMA)



Schematic Symbol

## APPLICATIONS

- | Power supply protection
- | Automotive application
- | Industrial application
- | Power management

## APPROVALS

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

## MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ )

| Parameter  | Symbol    | Value | Unit  |
|--|-----------|-------|-------|
| Peak Pulse Power Dissipation on 10/1000 $\mu$ s waveform (Note1, Note2).                     | $P_{PPM}$ | 400   | Watts |
| Steady State Power Dissipation at $T_L=75^\circ\text{C}$ , Lead lengths.375"(9.5mm) ( Note2) | $P_D$     | 3.3   | Watts |

- Notes :** 1.Non-repetitive current pulse, $T_A=25^\circ\text{C}$ .  
 2.Mounted on 5.0mm x 5.0mm (0.03mm thick) Copper Pads to each terminal.

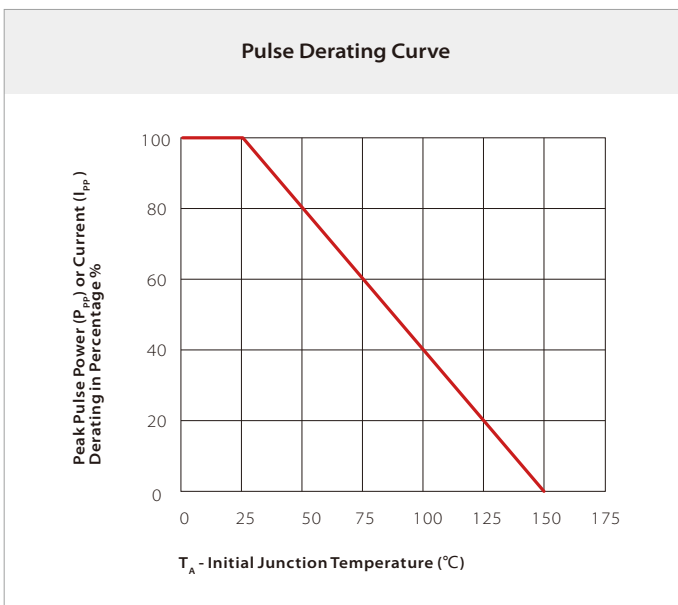
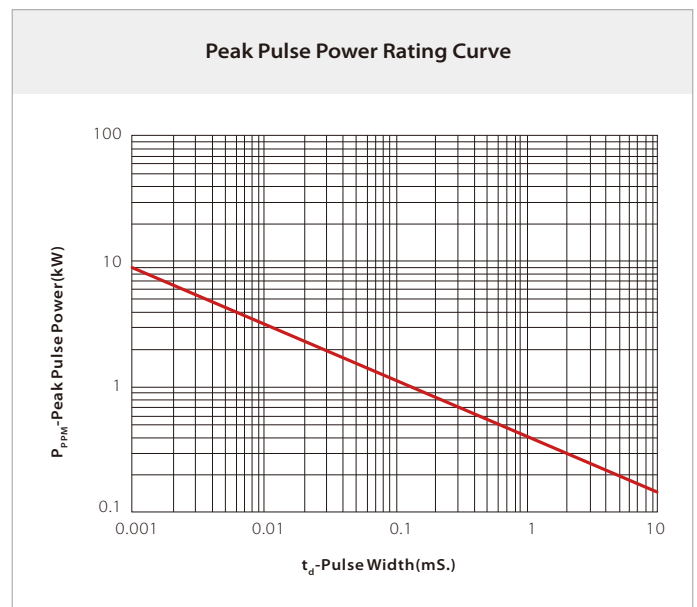
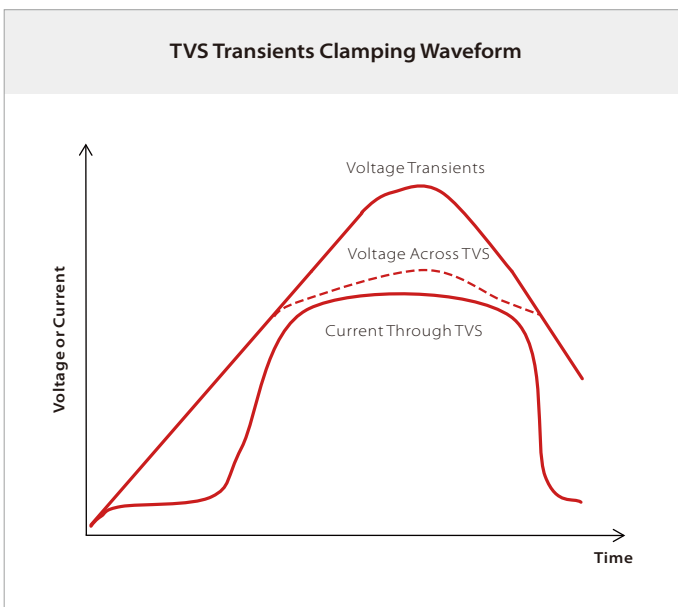
## THERMAL CONSIDERATIONS

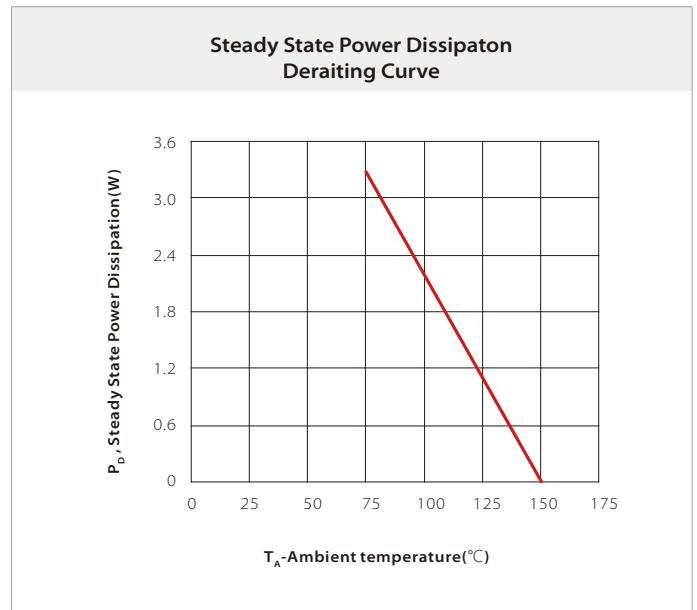
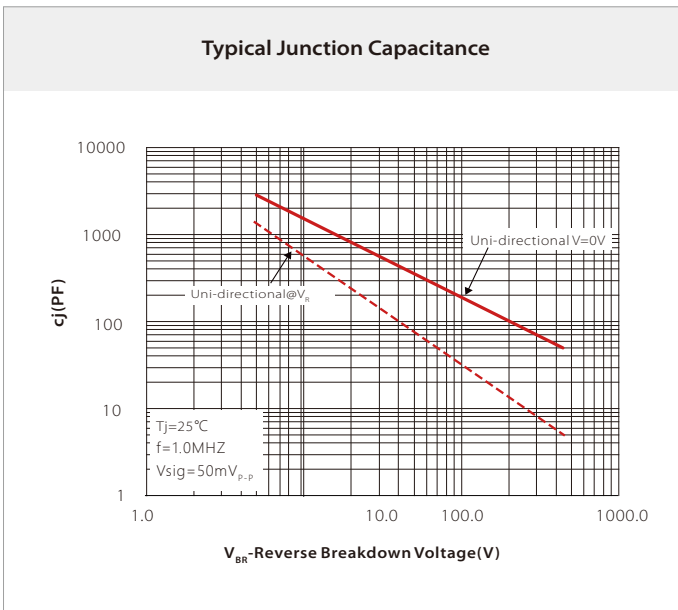
| Parameter                              | Symbol          | Value       | Unit                      |
|--|-----------------|-------------|---------------------------|
| Operating Junction Temperature         | $T_J$           | -55 to +150 | $^\circ\text{C}$          |
| Storage Temperature Range  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

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

| Part Number | Device Marking Code | Reverse Stand-off Voltage | Breakdown Voltage Min.@I <sub>T</sub> | Breakdown Voltage Max.@I <sub>T</sub> | Test Current        | Maximum Clamping Voltage @I <sub>pp</sub> | Peak Pulse Current  | Reverse Leakage @V <sub>RWM</sub> |
|-------------|---------------------|---------------------------|---------------------------------------|---------------------------------------|---------------------|---|---------------------|-----------------------------------|
|             |                     | V <sub>RWM</sub> (V)      | V <sub>BR</sub> (V)                   | V <sub>BR</sub> (V)                   | I <sub>T</sub> (mA) | V <sub>C</sub> (V)                        | I <sub>pp</sub> (A) | I <sub>R</sub> (uA)               |
| SVA40U600   | TV                  | 600.0                     | 670.0                                 | 741.0                                 | 1.0                 | 971.0                                     | 0.42                | 1.0                               |

## CHARACTERISTIC CURVES



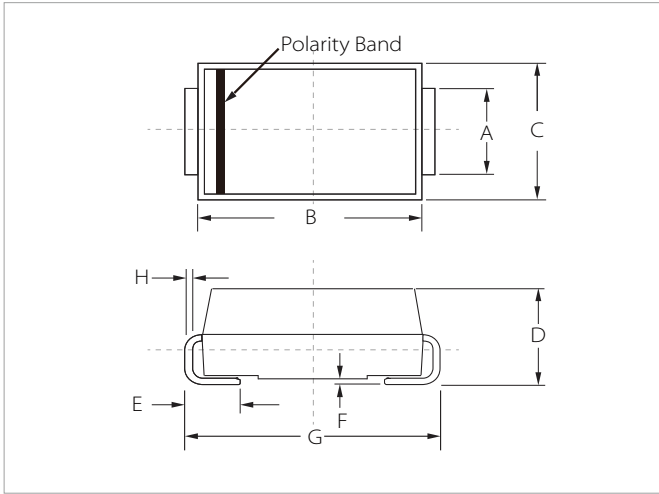


## SOLDERING PARAMETERS

| Reflow Condition  |                                   | Lead-free assembly                   |
|---|-----------------------------------|--------------------------------------|
| Pre Heat  | Temperature Max ( $T_{s(\min)}$ ) | 150 $^\circ\text{C}$                 |
|   | Temperature Max ( $T_{s(\max)}$ ) | 200 $^\circ\text{C}$                 |
|   | Time (min to max) ( $t_s$ )       | 60 – 180 secs                        |
| Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)              |                                   | 3 $^\circ\text{C}/\text{second}$ max |
| $T_{s(\max)}$ to $T_L$ - Ramp-up Rate                               |                                   | 3 $^\circ\text{C}/\text{second}$ max |
| Reflow  | Temperature ( $T_L$ ) (Liquidus)  | 217 $^\circ\text{C}$                 |
|   | Time (min to max) ( $t_r$ )       | 60 – 150 seconds                     |
| Peak Temperature ( $T_p$ )  |                                   | 260 $^\circ\text{C}$                 |
| Time within 5 $^\circ\text{C}$ of actual peak Temperature ( $t_p$ ) |                                   | 20 – 40 seconds                      |
| Ramp-down Rate  |                                   | 6 $^\circ\text{C}/\text{second}$ max |
| Time 25 $^\circ\text{C}$ to peak Temperature ( $T_p$ )              |                                   | 8 minutes max.                       |
| Do not exceed   |                                   | 260 $^\circ\text{C}$                 |

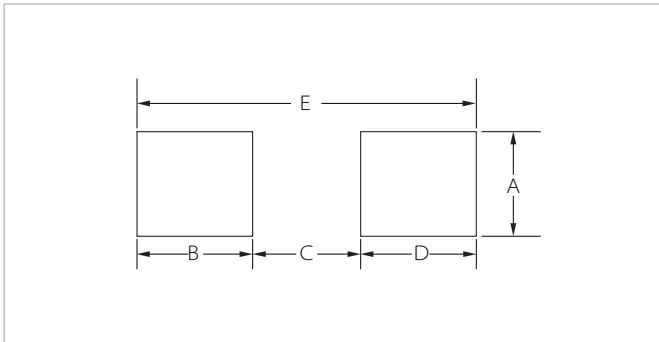


## DO-214AC(SMA) PACKAGE INFORMATION



| 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 |
|-------------|-------------------|----------|-----------|
| SVA40U600   | DO-214AC(SMA)     | 5000PCS  | 13"       |

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