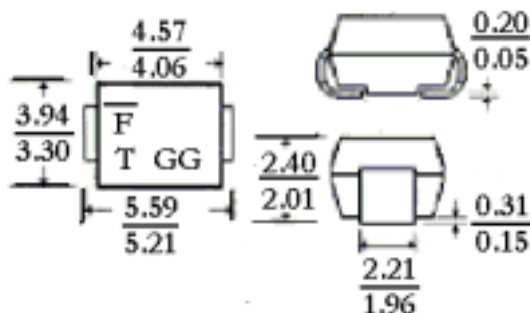




## DESCRIPTION

DO-214AA  
(SMB)

## MECHANICAL DIMENSION



Dimension in MM

## FEATURES

- ☐ UL94V-0 Flammability Classification
- ☐ ESD Protection >40k Voltage
- ☐ ,High Surge Current Capability
- ☐ Peak Off-State voltage from 58~300V
- ☐ Meet IEC100-4-4 & -5 Industry requirement
- ☐ Low Capacitance for T1/E1 Trunk and Line Card Application
- ☐ Provides Protection in Accordance with FCC part 68, UL1459, Bellcore 1089, ITU-TK. 20& K.21

| Part No | CODE | Repetitive<br>Peak Off<br>Stage<br>V <sub>drm</sub><br>(V) | Switching<br>Vol@100<br>V/uS<br>V <sub>s</sub><br>(V) | Minimum<br>Holding Current<br>dI/dt=1A/ms<br>I <sub>pp</sub><br>(mA) | Switching<br>Current I <sub>s</sub><br>(mA) | Urge Rating<br>I <sub>pp</sub> @<br>10/1000us<br>(A) | On-stage<br>Current<br>I <sub>T</sub><br>(A) | Typical<br>Capacitance<br>@50V<br>.@1MHz<br>(pF) |
|---------|------|------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------|------------------------------------------------------|----------------------------------------------|--------------------------------------------------|
| TSP110A | GF   | 90                                                         | 130                                                   | 150                                                                  | 800                                         | 50                                                   | 1                                            | 60                                               |
| TSP130A | GG   | 120                                                        | 160                                                   | 150                                                                  | 800                                         | 50                                                   | 1                                            | 40                                               |
| TSP150A | GH   | 140                                                        | 180                                                   | 150                                                                  | 800                                         | 50                                                   | 1                                            | 40                                               |
| TSP180A | GI   | 160                                                        | 220                                                   | 150                                                                  | 800                                         | 50                                                   | 1                                            | 40                                               |
| TSP230A | GJ   | 190                                                        | 260                                                   | 150                                                                  | 800                                         | 50                                                   | 1                                            | 30                                               |
| TSP260A | GK   | 220                                                        | 300                                                   | 150                                                                  | 800                                         | 50                                                   | 1                                            | 30                                               |
| TSP310A | GL   | 275                                                        | 350                                                   | 150                                                                  | 800                                         | 50                                                   | 1                                            | 30                                               |
| TSP350A | GM   | 300                                                        | 400                                                   | 150                                                                  | 800                                         | 50                                                   | 1                                            | 30                                               |
| TSP110B | GS   | 90                                                         | 130                                                   | 150                                                                  | 800                                         | 75                                                   | 1                                            | 100                                              |
| TSP130B | GT   | 120                                                        | 160                                                   | 150                                                                  | 800                                         | 75                                                   | 1                                            | 70                                               |
| TSP150B | GU   | 140                                                        | 180                                                   | 150                                                                  | 800                                         | 75                                                   | 1                                            | 70                                               |
| TSP180B | GV   | 160                                                        | 220                                                   | 150                                                                  | 800                                         | 75                                                   | 1                                            | 70                                               |
| TSP230B | GW   | 190                                                        | 260                                                   | 150                                                                  | 800                                         | 75                                                   | 1                                            | 50                                               |
| TSP260B | GX   | 220                                                        | 300                                                   | 150                                                                  | 800                                         | 75                                                   | 1                                            | 50                                               |
| TSP310B | GY   | 275                                                        | 350                                                   | 150                                                                  | 800                                         | 75                                                   | 1                                            | 40                                               |
| TSP350B | GZ   | 300                                                        | 400                                                   | 150                                                                  | 800                                         | 75                                                   | 1                                            | 40                                               |

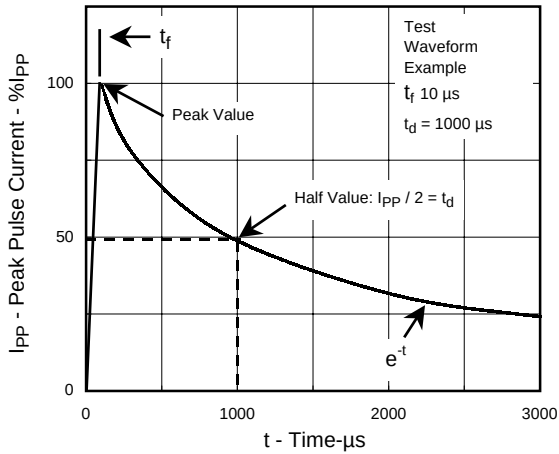
● MAX OFF-STATE CURRENT @ V<sub>DRM</sub>: 5uA; MAX ON-STATE VOL @ I<sub>T</sub>:5V



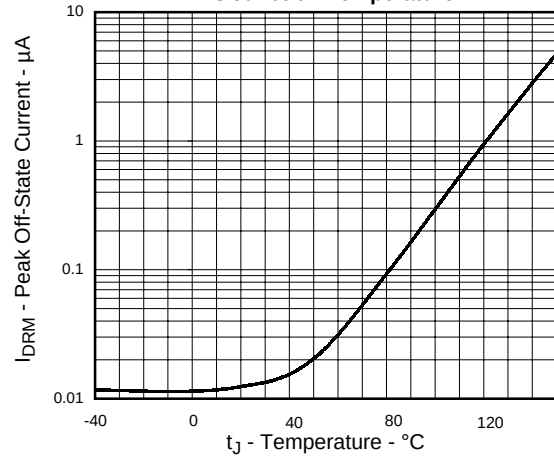
| Part No | CODE | Repetitive<br>Peak Off<br>Stage<br>Vdrm<br>(V) | Switching<br>Vol@100<br>V/uS<br>Vs<br>(V) | Minimum<br>Holding Current<br>dI/dt=1A/ms<br>Ipp<br>(mA) | Switching<br>Current Is<br>(mA) | Urge Rating<br>Ipp@<br>10/1000us<br>(A) | On-stage<br>Current<br>IT<br>(A) | Typical<br>Capacitance<br>@50V<br>.@1MHz<br>(pF) |
|---------|------|------------------------------------------------|-------------------------------------------|----------------------------------------------------------|---------------------------------|-----------------------------------------|----------------------------------|--------------------------------------------------|
| TSP110C | HF   | 90                                             | 130                                       | 150                                                      | 800                             | 100                                     | 1                                | 100                                              |
| TSP130C | HG   | 120                                            | 160                                       | 150                                                      | 800                             | 100                                     | 1                                | 70                                               |
| TSP150C | HH   | 140                                            | 180                                       | 150                                                      | 800                             | 100                                     | 1                                | 70                                               |
| TSP180C | HI   | 160                                            | 220                                       | 150                                                      | 800                             | 100                                     | 1                                | 70                                               |
| TSP230C | HJ   | 190                                            | 260                                       | 150                                                      | 800                             | 100                                     | 1                                | 50                                               |
| TSP260C | HK   | 220                                            | 300                                       | 150                                                      | 800                             | 100                                     | 1                                | 50                                               |
| TSP310C | HL   | 275                                            | 350                                       | 150                                                      | 800                             | 100                                     | 1                                | 40                                               |
| TSP350C | HM   | 300                                            | 400                                       | 150                                                      | 800                             | 100                                     | 1                                | 40                                               |

- MAX OFF-STATE CURRENT @ VDRM: 5uA; MAX ON-STATE VOL @ VT:5V

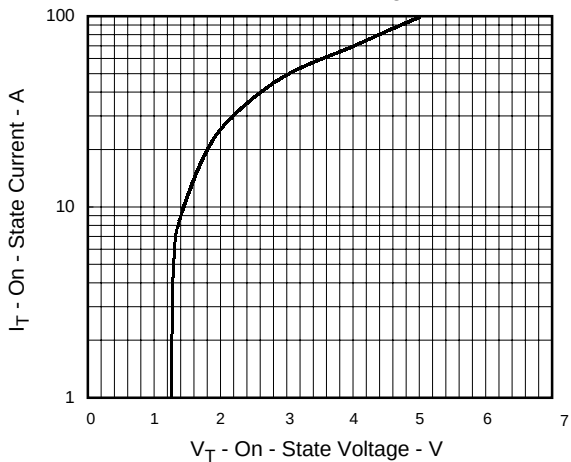
**Fig.1 Pulse Wave Form Example**



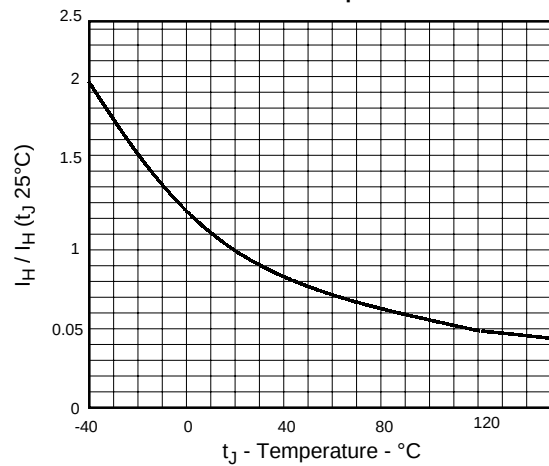
**Fig.2 Typical Peak Off-State Current Vs Junction Temperature**



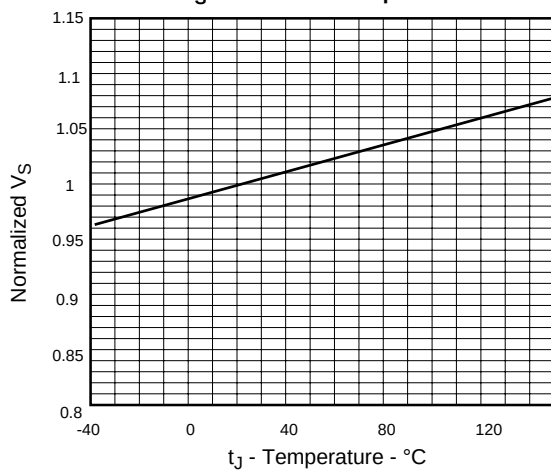
**Fig.3 Typical On-State Current Vs On-State Voltage**



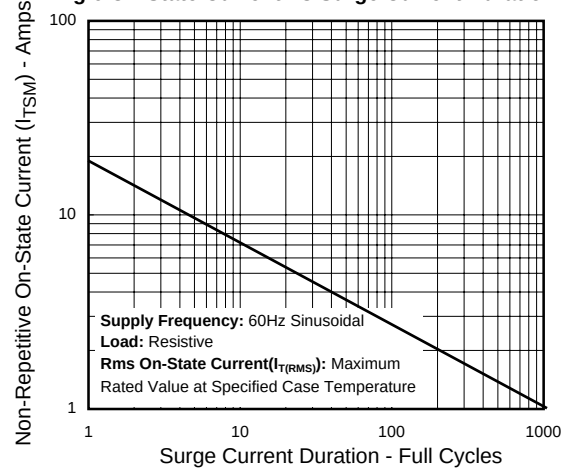
**Fig.4 Typical Holding Current Vs Junction Temperature**



**Fig.5 Typical normalized  $V_S$  Vs Junction Temperature**



**Fig.6 On-State Current Vs Surge Current Duration**



**Fig.7 V - I Characteristics Curve**

