

# ARU0511D2

## ESD Protection Diode

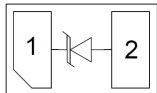
**VOLTAGE** 5 Volt

### FEATURES

- 2-pin leadless package
- Low Clamping Voltage
- Low operating voltage: 5V
- Low Leakage Current
- Ultra low capacitance: 15pF typical
- IEC 61000-4-2  $\pm 15\text{KV}$  air ;  $\pm 8\text{KV}$  contact
- IEC 61000-4-5 (Lightning) 7A (8/20 $\mu\text{s}$ )
- Lead free in compliance with EU RoHS
- Marking code: 28

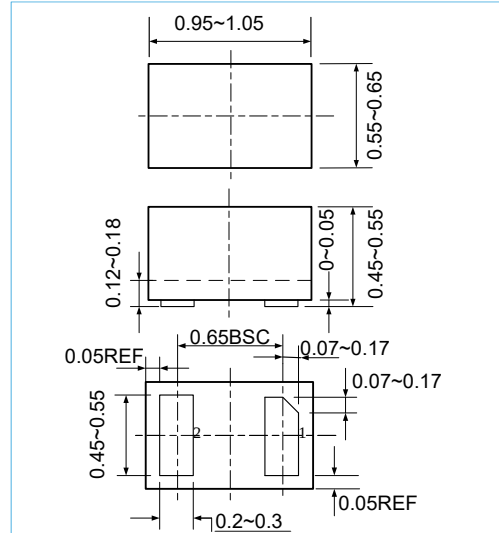
### MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



**DFN1006-2L**

Unit:mm

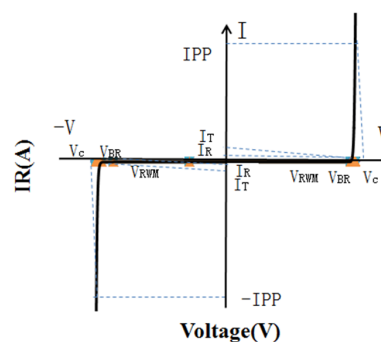


## ABSOLUTE MAXIMUM RATINGS( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| Parameter                                | Symbol    | Value       | Unit             |
|------------------------------------------|-----------|-------------|------------------|
| Peak Pulse Power (8/20 $\mu\text{s}$ )   | $P_{PP}$  | 100         | W                |
| Peak Pulse Current (8/20 $\mu\text{s}$ ) | $I_{PP}$  | 7           | A                |
| Junction Temperature                     | $T_J$     | -55 to +125 | $^\circ\text{C}$ |
| Storage temperature                      | $T_{STG}$ | -55 to +150 | $^\circ\text{C}$ |

## Electrical Parameters ( $T=25^\circ\text{C}$ )

| Symbol    | Parameter                           |
|-----------|-------------------------------------|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current  |
| $V_C$     | Clamping Voltage @ $I_{PP}$         |
| $V_{RWM}$ | Working Peak Reverse Voltage        |
| $I_R$     | Reverse Leakage Current @ $V_{RWM}$ |
| $V_{BR}$  | Breakdown Voltage @ $I_R$           |
| $I_T$     | Test Current                        |

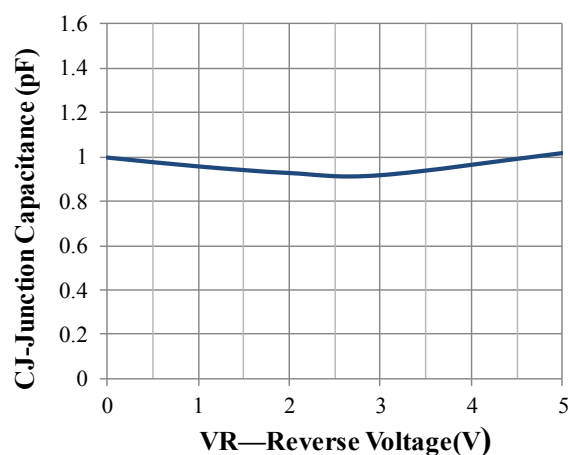


## ELECTRICAL CHARACTERISTICS( $T_A = 25^\circ\text{C}$ unless otherwise noted)

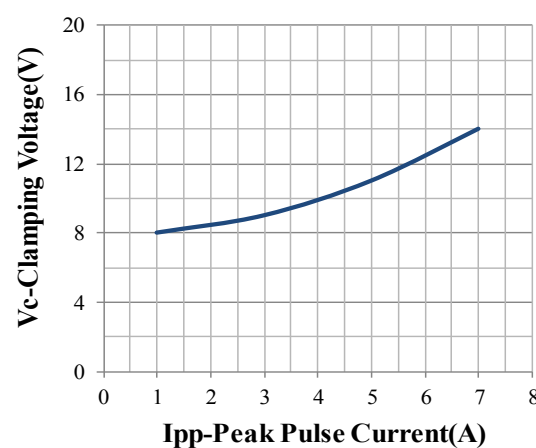
| Parameter                 | Symbol    | Condition                                  | Min | Typ | Max | Unit          |
|---------------------------|-----------|--------------------------------------------|-----|-----|-----|---------------|
| Reverse stand-off Voltage | $V_{RWM}$ |                                            |     |     | 5.3 | V             |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T=1\text{mA}$                           | 6.0 | 7.0 | 8.5 | V             |
| Reverse Leakage Current   | $I_R$     | $V_{RWM} = 5.3\text{V}$                    |     |     | 0.5 | $\mu\text{A}$ |
| Clamping Voltage          | $V_C$     | $I_{PP}=1\text{A}$ , $t_p=8/20\mu\text{s}$ |     | 9.0 |     | V             |
|                           | $V_C$     | $I_{PP}=7\text{A}$ , $t_p=8/20\mu\text{s}$ |     |     | 15  | V             |
| Junction Capacitance      | $C_J$     | $V_R=0\text{V}$ , $f=1\text{MHz}$          |     | 1.0 | 1.5 | pF            |

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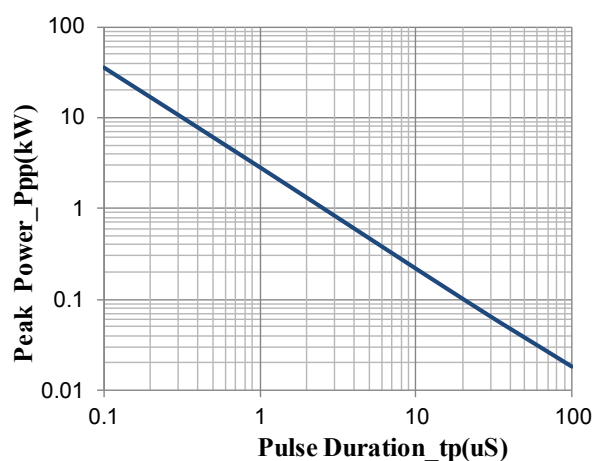
## Typical Characteristics



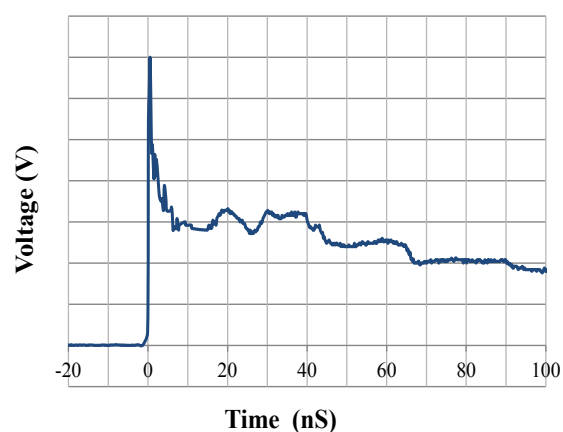
Junction Capacitance vs. Reverse Voltage



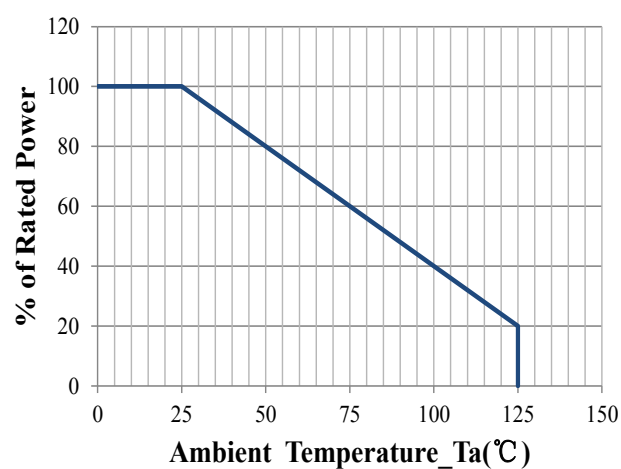
Clamping Voltage vs. Peak Pulse Current



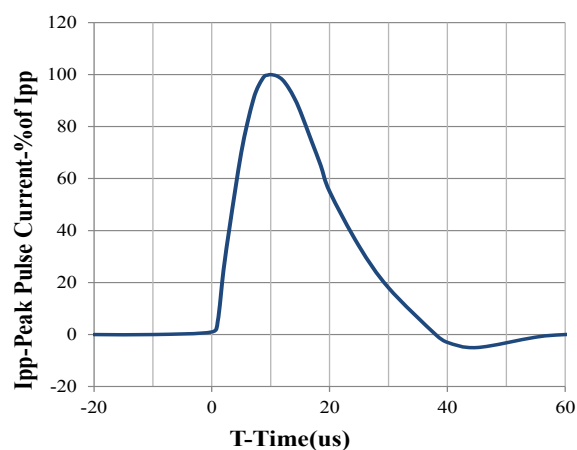
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform



Power Derating Curve



8 X 20us Pulse Waveform

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### ORDER INFORMATION

- Packing information

| Part Number | Case       | Reel Size | QUANTITY |
|-------------|------------|-----------|----------|
| ARU0511D2   | DFN1006-2L | 7 Inch    | 10000    |