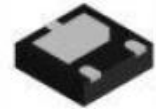


1-Line High Power TVS Diode Array

APPLICATION

- ◆ Power Management
- ◆ Industrial Application
- ◆ Power Supply Protection

DFN2020



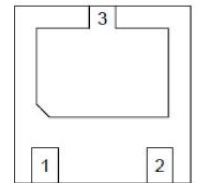
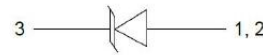
IEC COMPATIBILITY

Package: DFN2020-3

- ◆ IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- ◆ IEC61000-4-5 (Lightning) 140A-280A (8/20 μs)

FEATURES

- ◆ Very high peak pulse power (8/20 μs)
- ◆ Ultra low leakage: nA level
- ◆ Stand-off Voltage: 4.5V ~ 24V
- ◆ Ultra low clamping voltage
- ◆ One power line protects



Transparent top view

Circuit Diagram

Pin Schematic

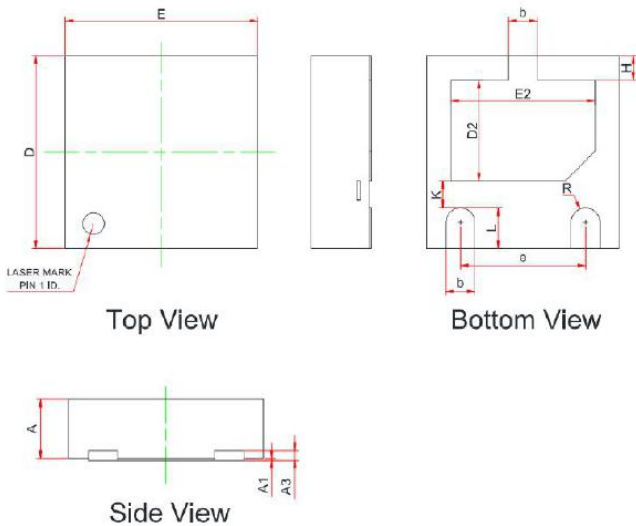
Electrical Characteristics

| Parameter | Symbol | Value |
|-------------------------------|--------|-------------------|
| ESD per IEC 61000-- (Air) | VESD | $\pm 30\text{kV}$ |
| ESD per IEC 61000-- (Contact) | | $\pm 30\text{kV}$ |
| Operating Temperature Range | TJ | -55 to +125 ° |
| Storage Temperature Range | Tstg | -55 to +150 °C |

Electrical Characteristics

| Part Number | VRWM V | VBR V | IR (max) (μ A) | Co Max value pF | Vc @1A Max V | Vc @ A Max V | Ipp@8/2 0us A max | Ppp 8/20us W | Delivery Time Days |
|-------------|-----------|----------|---------------------------|-----------------------|--------------------|--------------------|-------------------------|--------------------|-----------------------|
| HAS4511P4 | 4.5 | 4.8 | 2 | 680 | 10 | 18 | 280 | 5000 | 7days |
| HAS0511P4 | 5 | 6 | 2 | 680 | 13 | 21 | 280 | 5800 | 7days |
| HAS0711P4 | 7 | 7.5 | 1 | 1000 | 10 | 22 | 275 | 5000 | 7days |
| HAS1011P4 | 10 | 11 | 1 | 600 | 13.5 | 25.5 | 235 | 5000 | 7days |
| HAS1211P4 | 12 | 13 | 1 | 550 | 15 | 30 | 200 | 6000 | 7days |
| HAS1511P4 | 15 | 16.5 | 1 | 480 | 21 | 36 | 180 | 6500 | 7days |
| HAS1811P4 | 18 | 20 | 1 | 430 | 25 | 43 | 150 | 6400 | 7days |
| HAS2011P4 | 20 | 22 | 1 | 440 | 28 | 45 | 145 | 6500 | 7days |
| HAS2411P4 | 24 | 24.8 | 1 | 410 | 32 | 50 | 140 | 6500 | 7days |

Package Mechanical Data



| SYM | DIMENSIONS | | |
|-----|-------------|------|------|
| | MILLIMETERS | | |
| | MIN | NOM | MAX |
| A | 0.55 | 0.60 | 0.65 |
| A1 | 0.00 | 0.02 | 0.05 |
| A3 | 0.10REF | | |
| b | 0.25 | -- | 0.35 |
| D | 1.90 | -- | 2.10 |
| E | 1.90 | -- | 2.10 |
| D2 | 0.95 | -- | 1.15 |
| E2 | 1.40 | -- | 1.60 |
| e | 1.20 | -- | 1.40 |
| H | 0.20 | -- | 0.30 |
| K | 0.20 | -- | 0.40 |
| L | 0.35 | -- | 0.45 |
| R | 0.13 | -- | -- |

Ordering Information

| Part Number | Qty per Reel | Reel Size | Package | Delivery Time |
|-------------|--------------|-----------|-----------|---------------|
| HASxx11P4 | 3000pcs | 7inch | DFN2020-3 | 7days |