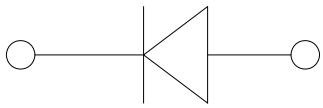
# EM520

## Plastic High Voltage Rectifier



### Features

- VR 2KV
- IO 0.5A
- Glass passivated chip junction
- High surge current capability

### Mechanical Data

- **Package**: DO-204AL(DO-41)

Molding compound meets UL 94 V-0 flammability rating,

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- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:**Color band denotes cathode end

### ■Maximum Ratings (Ta=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | EM520 |
|---|---|---|---|
| Device marking code | | | EM520 |
| Maximum Repetitive peak reverse voltage | VRRM | V | 2000 |
| Maximum RMS Voltage | VRMS | V | 1400 |
| Maximum DC Blocking Voltage | VDC | V | 2000 |
| Average Forward Current @60Hz sine wave, Resistance load, Ta =90℃ | $I_{F(AV)}$ | A | 0.5 |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃ | $I_{FSM}$ | A | 20 |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃ | | | 40 |
| Current squared time @1ms≤t8.3≤ms Tj=25℃，Rating of per diode | $I^2t$ | $A^2s$ | 1.66 |
| Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | Cj | pF | 4.5 |
| Storage Temperature | Tstg | ℃ | -55 ~ +150 |
| Junction Temperature | Tj | ℃ | -55 ~ +150 |

### ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | EM520 |
|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | $V_F$ | V | $I_{FM}$=0.5A | 2 |
| Maximum DC reverse current at rated DC blocking voltage per diode | IR | μA | $T_j$=25℃ | 5 |
| | | | $T_j$=125℃ | 50 |

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | EM520 |
|---|---|---|---|
| Typical Thermal Resistance | $R_{\theta J\text{-}A}$ | ℃/W | 60 |

## ■Ordering Information (Example)

| PREFERED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|---|
| EM520 | C1 | Approximate 0.27 | Approximate 1000 | 1000 | 50000 | Bulk |

## ■ Characteristics (Typical)

FIG.1: Io-Ta Curve

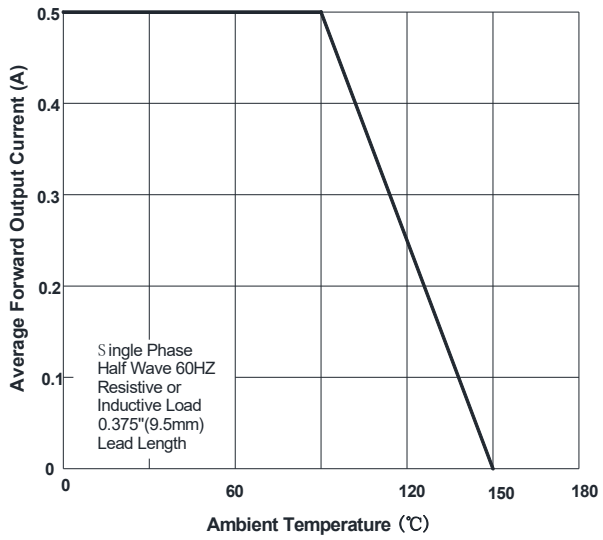



FIG.2: Forward Surge Current Capability

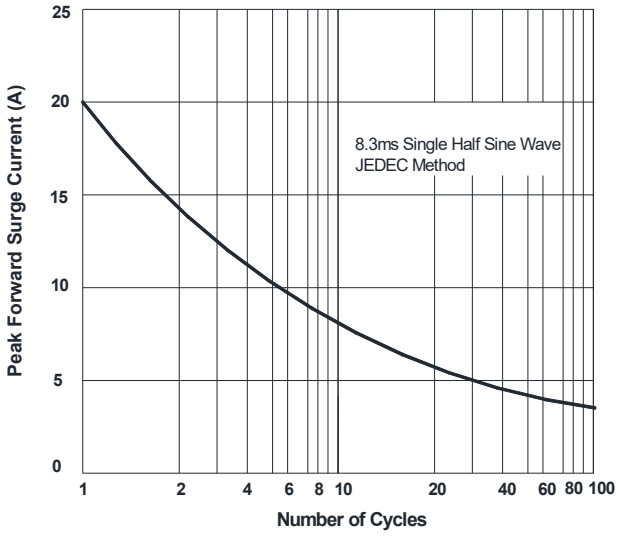



FIG.3: Forward Voltage

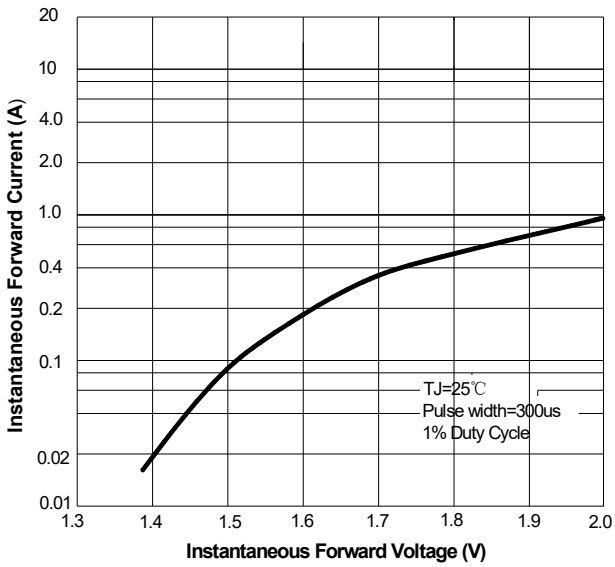
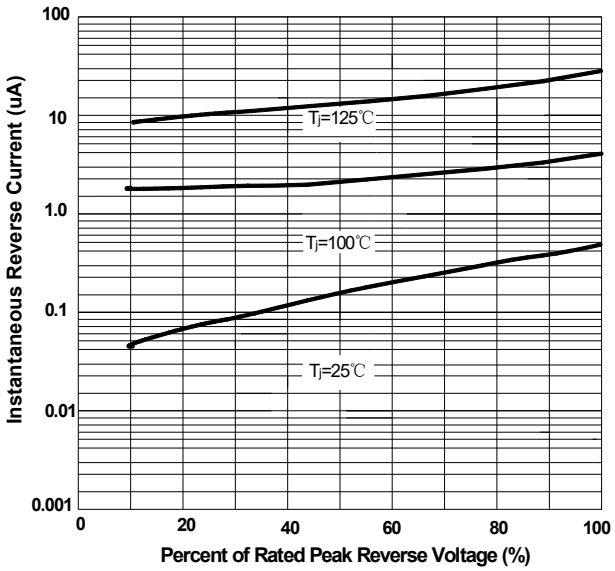
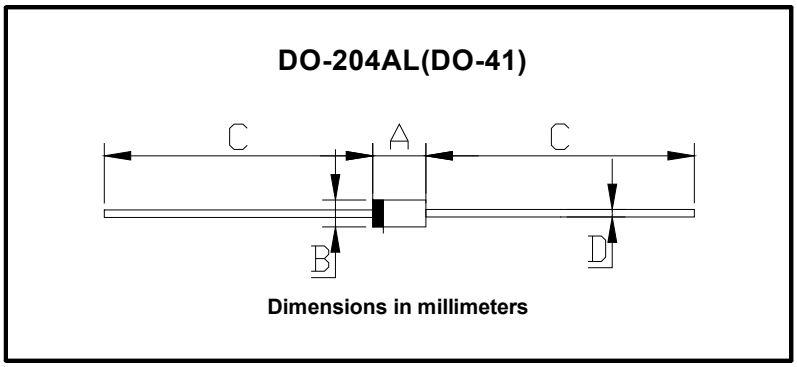



FIG.4: Typical Reverse Characteristics



## ■ Outline Dimensions




| DO-204AL(DO-41) | | |
|---|---|---|
| Dim | Min | Max |
| A | 4.22 | 5.21 |
| B | 2.03 | 2.72 |
| C | 25.4 | / |
| D | 0.69 | 0.86 |

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