

## Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Guard Ring Protection
- High Surge Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

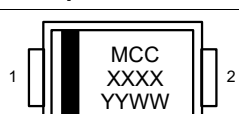

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

| Parameter  | Symbol      | Value      |            |            |            |            |            |             | Unit             |
|--|-------------|------------|------------|------------|------------|------------|------------|-------------|------------------|
|  |             | SK22 HE3-L | SK23 HE3-L | SK24 HE3-L | SK25 HE3-L | SK26 HE3-L | SK28 HE3-L | SK210 HE3-L |                  |
| Peak Repetitive Reverse Voltage                          | $V_{RRM}$   |            |            |            |            |            |            |             | V                |
| Working Peak Reverse Voltage                             | $V_{RWM}$   | 20         | 30         | 40         | 50         | 60         | 80         | 100         |                  |
| DC Blocking Voltage                                      | $V_R$       |            |            |            |            |            |            |             |                  |
| RMS Reverse Voltage                                      | $V_{RMS}$   | 14         | 21         | 28         | 35         | 42         | 56         | 70          | V                |
| Average Rectified Forward Current                        | $I_{F(AV)}$ | 2          |            |            |            |            |            |             | A                |
| Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave | $I_{FSM}$   | 50         |            |            |            |            |            |             | A                |
| Current Squared Time @ 1ms ≤ t ≤ 8.3ms                   | $I^2t$      | 10.375     |            |            |            |            |            |             | A <sup>2</sup> s |

## Marking code

| Part Number | Marking Code |
|-------------|--------------|
| SK22HE3-L   | SK22         |
| SK23HE3-L   | SK23         |
| SK24HE3-L   | SK24         |
| SK25HE3-L   | SK25         |
| SK26HE3-L   | SK26         |
| SK28HE3-L   | SK28         |
| SK210HE3-L  | SK210        |

## Internal Structure

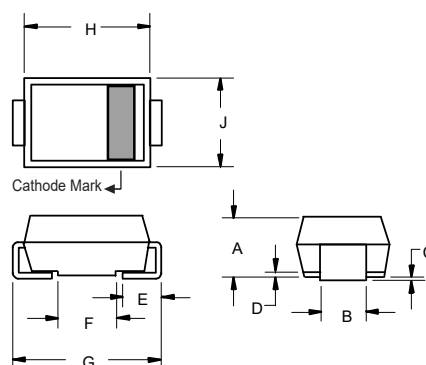
| Pin | Description | Simplified Outline  | Graphic Symbol  |
|-----|-------------|---|---|
| 1   | Cathode     |  <p>XXXX = Marking Code<br/>YYWW = Date Code</p> |  |
| 2   | Anode       |   |   |

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High temperature solder exemption applied, see EU directive annex 7a.

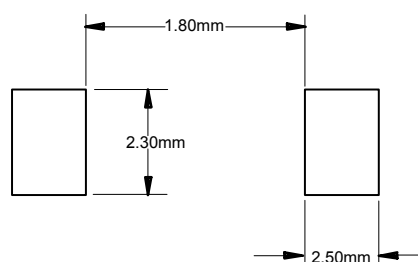
# 2 Amp Surface Mount Schottky Rectifier 20 to 100 Volts

## DO-214AA (SMB) (LEAD FRAME)



| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | 0.079  | 0.103 | 2.00 | 2.62 |      |
| B   | 0.075  | 0.087 | 1.91 | 2.21 |      |
| C   | 0.002  | 0.008 | 0.05 | 0.20 |      |
| D   | 0.006  | 0.012 | 0.15 | 0.31 |      |
| E   | 0.030  | 0.060 | 0.76 | 1.52 |      |
| F   | 0.065  | 0.091 | 1.65 | 2.32 |      |
| G   | 0.200  | 0.220 | 5.08 | 5.59 |      |
| H   | 0.160  | 0.191 | 4.06 | 4.85 |      |
| J   | 0.130  | 0.155 | 3.30 | 3.94 |      |

## Suggested Solder Pad Layout



### Thermal characteristics

| Symbol        | Parameter                                   | Conditions | Min | Typ | Max | Unit |
|---------------|---|------------|-----|-----|-----|------|
| $T_J$         | Operating Junction Temperature Range        |            | -55 |     | 150 | °C   |
| $T_{stg}$     | Storage Temperature Range                   |            | -55 |     | 150 | °C   |
| $R_{th(J-L)}$ | Thermal Resistance from Junction to Lead    | Note 1     |     | 18  |     | °C/W |
| $R_{th(J-A)}$ | Thermal Resistance from Junction to Ambient | Note 1     |     | 70  |     | °C/W |

Note:

1. Mounted on P.C.B. with 8.0 mm x 8.0 mm copper pad areas.

### Electrical Characteristics @ 25°C Unless Otherwise Specified

| Parameter  | Symbol | Test Conditions  | Min | Typ             | Max                      | Unit |
|--|--------|--|-----|-----------------|--------------------------|------|
| Forward Voltage<br>SK22HE3-L ~ SK24HE3-L<br>SK25HE3-L ~ SK26HE3-L<br>SK28HE3-L ~ SK210HE3-L      | $V_F$  | $I_F=2A; T_J=25^\circ C$   |     |                 | 0.50<br>0.70<br>0.85     | V    |
| Reverse Current<br>SK22HE3-L ~ SK26HE3-L<br>SK28HE3-L ~ SK210HE3-L                               | $I_R$  | at Rated $V_R; T_J=25^\circ C$<br>at Rated $V_R; T_J=125^\circ C$<br>at Rated $V_R; T_J=25^\circ C$<br>at Rated $V_R; T_J=125^\circ C$ |     |                 | 0.1<br>20<br>0.01<br>0.2 | mA   |
| Junction Capacitance<br>SK22HE3-L ~ SK24HE3-L<br>SK25HE3-L ~ SK26HE3-L<br>SK28HE3-L ~ SK210HE3-L | $C_J$  | $V_R=4V; f=1MHz; T_J=25^\circ C$   |     | 115<br>95<br>60 |                          | pF   |

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

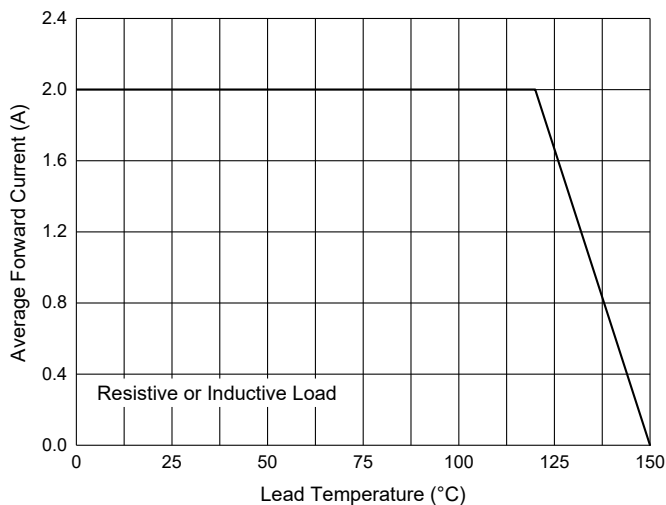


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

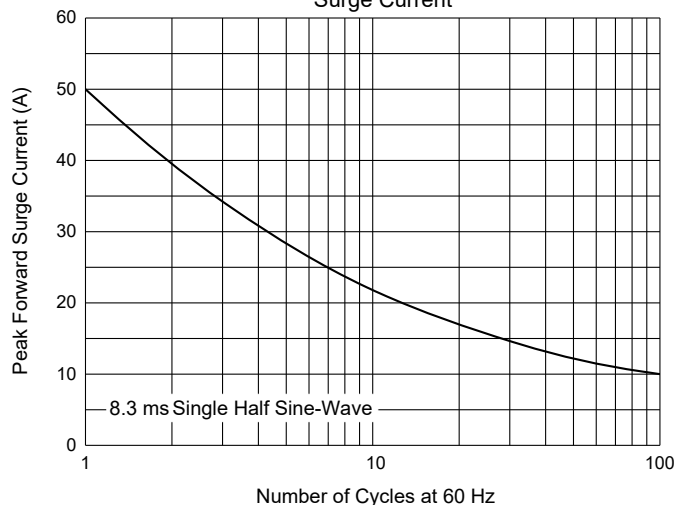


Fig. 3 - Typical Forward Characteristics

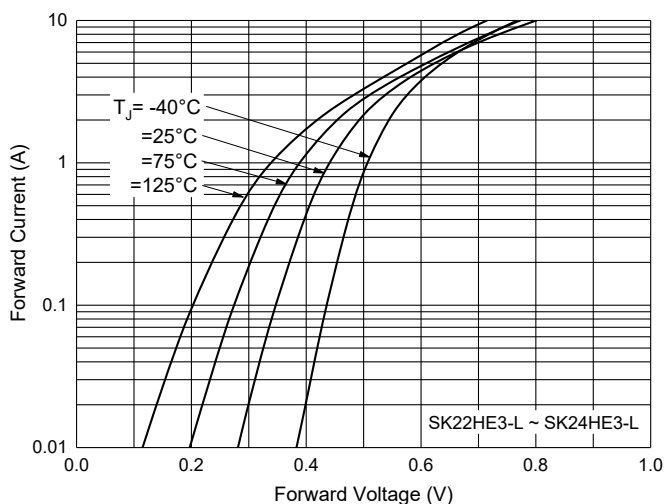


Fig. 4 - Typical Reverse Leakage Characteristics

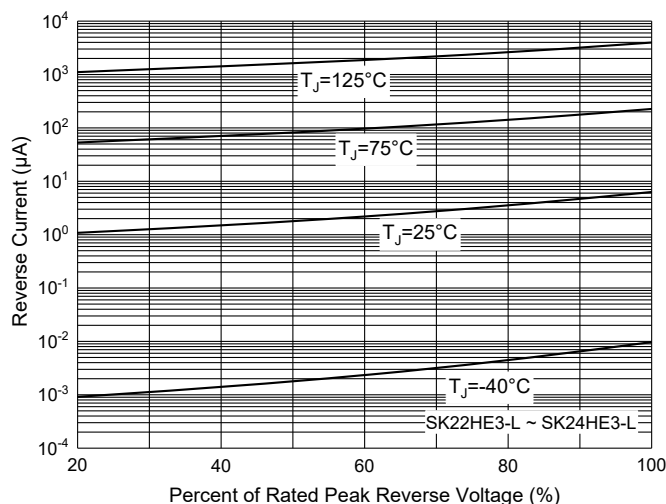


Fig. 5 - Typical Forward Characteristics

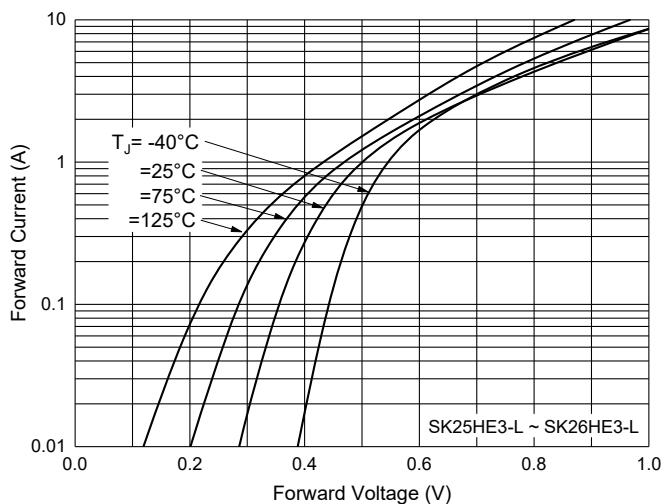
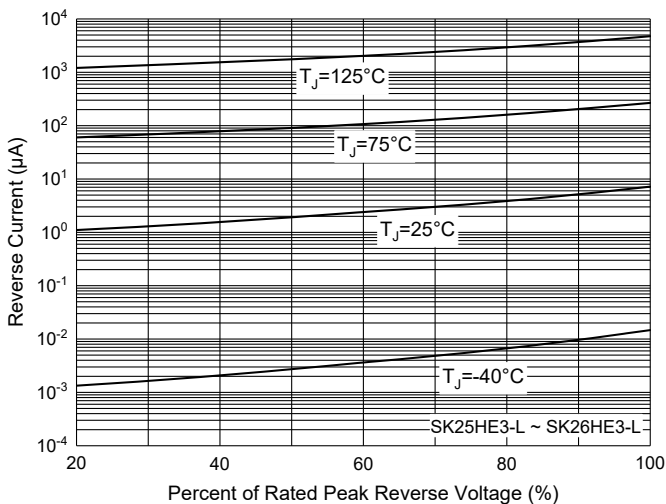


Fig. 6 - Typical Reverse Leakage Characteristics



**Curve Characteristics**

Fig. 7 - Typical Forward Characteristics

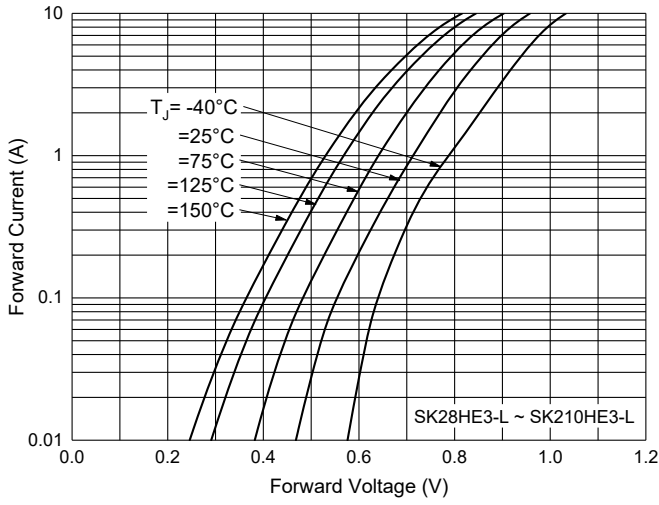


Fig. 8 - Typical Reverse Leakage Characteristics

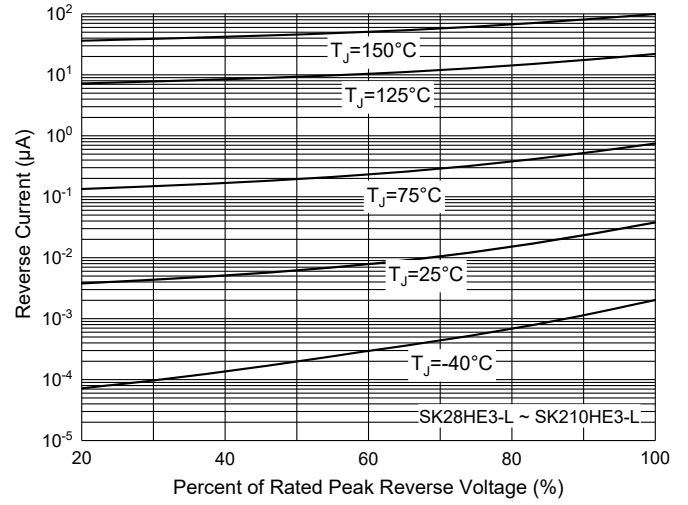


Fig. 9 - Capacitance Characteristics

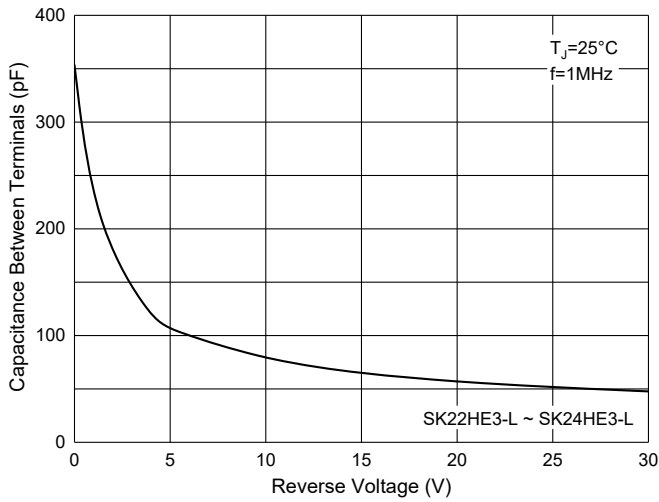


Fig. 10 - Capacitance Characteristics

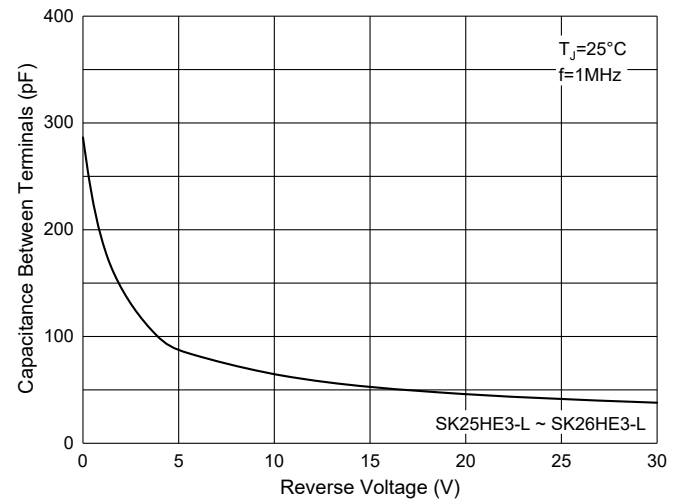
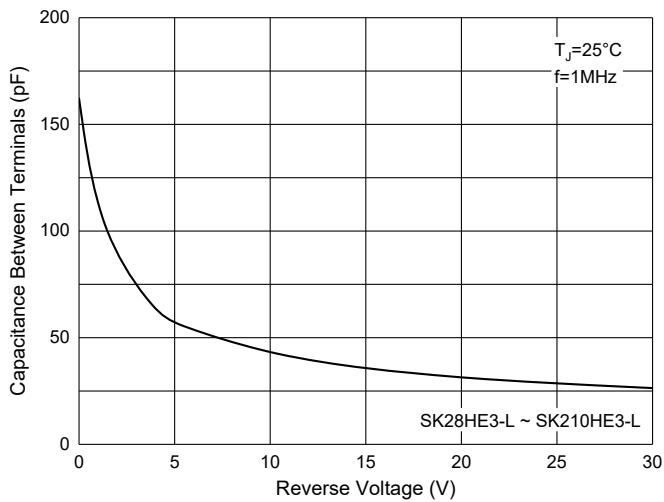


Fig. 11 - Capacitance Characteristics



## Ordering Information

| Device                     | Packing              |
|----------------------------|----------------------|
| SK22HE3-LTP ~ SK210HE3-LTP | Tape&Reel:3Kpcs/Reel |

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