

SMA Plastic-Encapsulate Diodes

Schottky Rectifier Diodes

Features:

- $I_{F(AV)}$ 1A
- V_{RRM} 20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

Applications:

- Rectifier

Marking

- DSS1X
 X : From 2 To 20

SMA



Limiting Values(Absolute Maximum Rating)

| Item | Symbol | Unit | Test Conditions | KDSS1 | | | | | | | | | |
|--------------------------------------|-------------|-------------|--|------------|----|----|----|----|----|-----|-----|-----|--|
| | | | | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 15 | 20 | |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | |
| Maximum RMS Voltage | V_{RMS} | V | | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 | |
| Average Forward Current | $I_{F(AV)}$ | A | 60Hz Half-sine wave , Resistance load , FIG.1 | 1.0 | | | | | | | | | |
| Surge(Non-repetitive)Forward Current | I_{FSM} | | 60Hz Half-sine wave , 1 cycle , $T_a=25^{\circ}C$ | 40 | | | | | | | | | |
| Junction Temperature | T_J | $^{\circ}C$ | | -55~+150 | | | | | | | | | |
| Storage Temperature | T_{STG} | $^{\circ}C$ | | -55 ~ +150 | | | | | | | | | |

Electrical Characteristics (T =25°C Unless otherwise specified)

| Item | Symbol | Unit | Test Condition | KDSS1 | | | | | | | | | |
|-----------------------------|------------------|---------------|-------------------------------|--------------------|---|------|---|------|---|------|----|----|--|
| | | | | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 15 | 20 | |
| Peak Forward Voltage | V_F | V | $I_F=1.0A$ | 0.50 | | 0.65 | | 0.80 | | 0.90 | | | |
| Peak Reverse Current | I_{RRM1} | mA | $V_{RM}=V_{RRM}$ | $T_a=25^{\circ}C$ | | | | | | | | | |
| | I_{RRM2} | | | $T_a=100^{\circ}C$ | | | | | | | | | |
| Thermal Resistance(Typical) | $R_{\theta J-A}$ | $^{\circ}C/W$ | Between junction and ambient | 88 | | | | | | | | | |
| | $R_{\theta J-L}$ | | Between junction and terminal | 28 | | | | | | | | | |

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

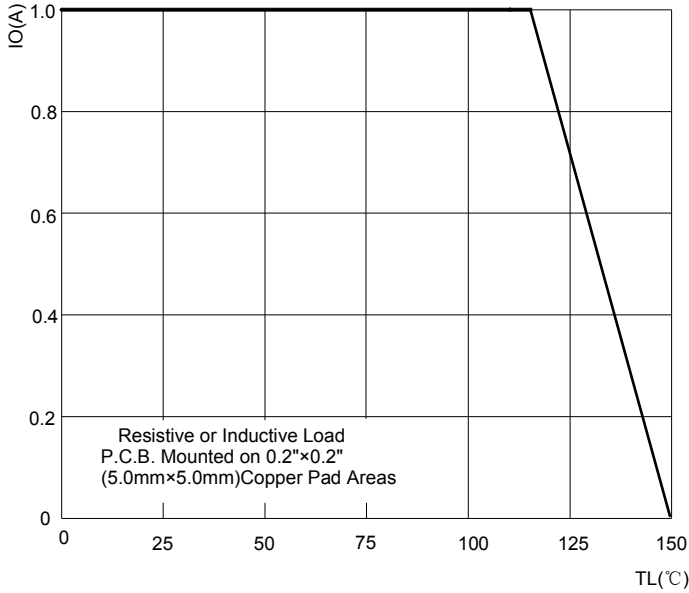


FIG2: Surge Forward Current Capability

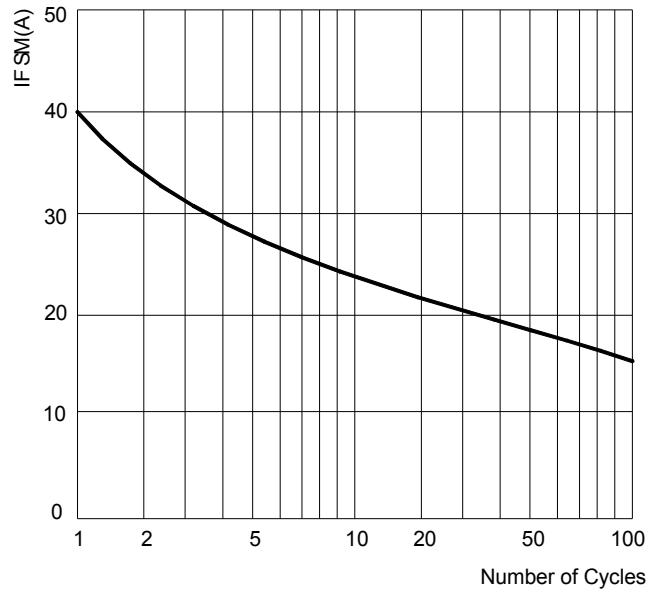


FIG.3: TYPICAL FORWARD CHARACTERISTICS

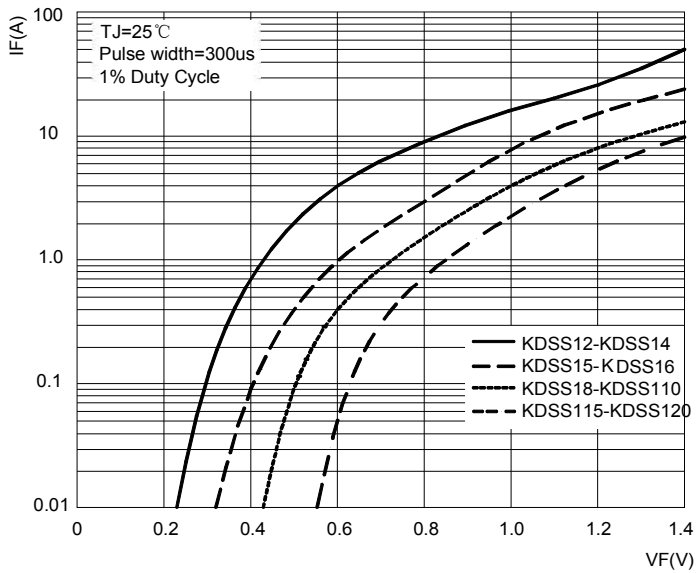
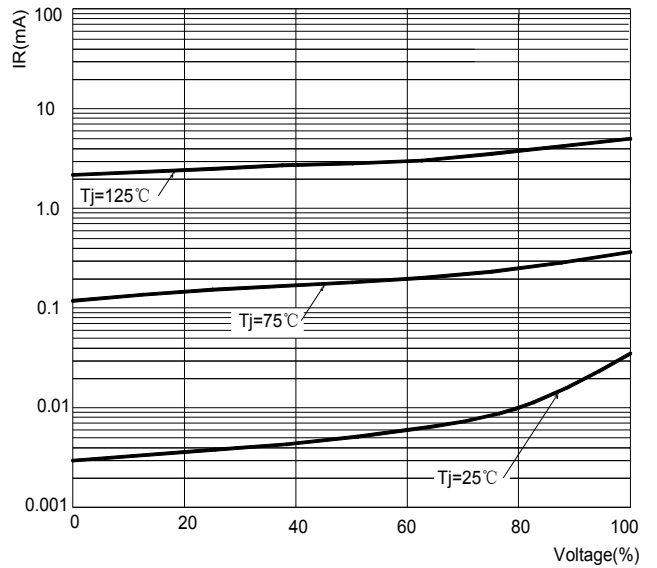
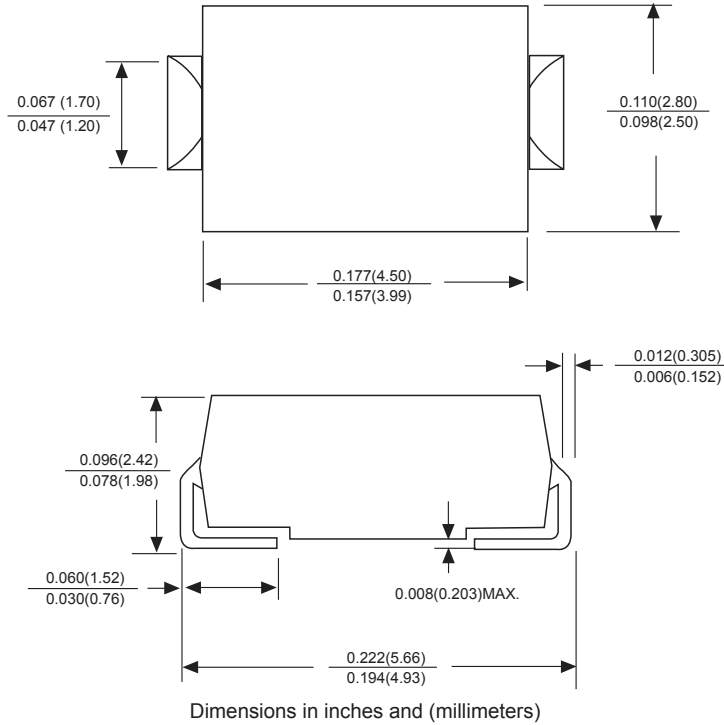


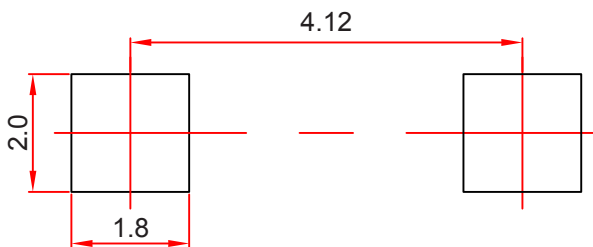
FIG.4: TYPICAL REVERSE CHARACTERISTICS



SMA Package Outline Dimensions



SMA Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

Reel Taping Specifications For Surface Mount Devices-SMA

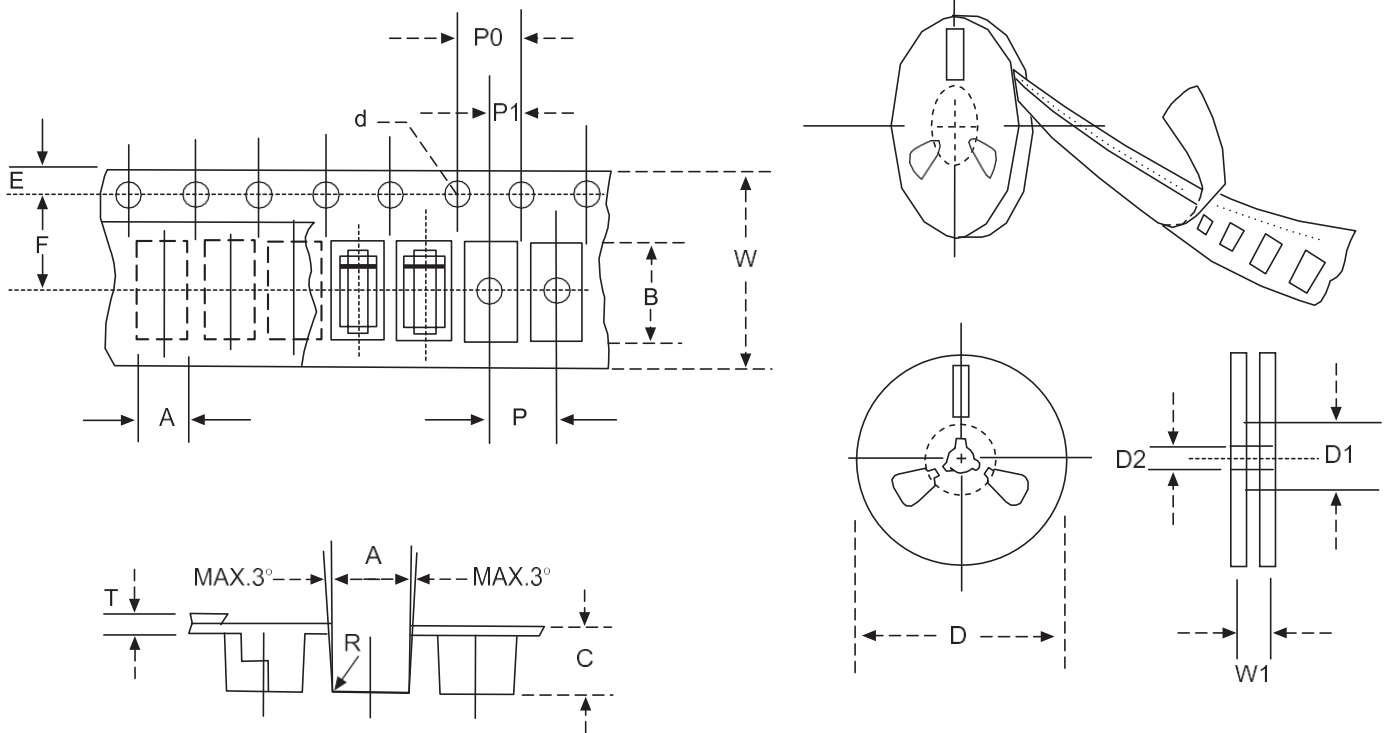


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

| ITEM | SYMBOL | SMA mm(inch) |
|------------------------|--------|-------------------------|
| Carrier width | A | 2.79±0.1(0.110±0.004) |
| Carrier length | B | 5.33±0.1(0.210±0.004) |
| Carrier depth | C | 2.36±0.1(0.093±0.004) |
| Sprocket hole | d | 1.55±0.05(0.061±0.002) |
| Reel outside diameter | D | 279± 2.0 (11± 0.079) |
| Reel inner diameter | D1 | 75± 1.0(2.95±0.039) |
| Feed hole diameter | D2 | 13±0.5(0.512±0.020) |
| Strocket hole position | E | 1.75±0.1(0.069±0.004) |
| Punch hole position | F | 5.5±0.05(0.217±0.002) |
| Punch hole pitch | P | 4.0±0.1(0.157±0.004) |
| Sprocket hole pitch | P0 | 4.0±0.1(0.157±0.004) |
| Embossment center | P1 | 2.0±0.1(0.079±0.004) |
| Totall tape thickness | T | 0.28±0.02(0.011±0.0008) |
| Tape width | W | 12.0±0.2(0.472±0.008) |
| Reel width | W1 | 16.8±2.0(0.661±0.079) |

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.