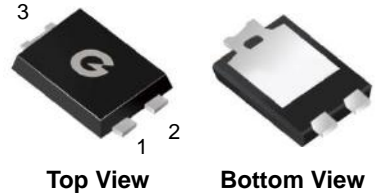


Schottky Barrier Rectifier

D10PS40 - D10PS45

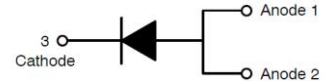
Features

- Metal silicon junction, majority carrier conduction
- High forward surge current capability
- Low forward voltage drop
- High temperature soldering guaranteed: 260°C @ 10s
- Robust guarding for over voltage protection
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards



Top View

Bottom View



Mechanical Data

- Case: TO-277B molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated, solderable per MIL- STD-202, Method 208

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

| Parameter | Symbol | D10PS40 | D10PS45 | Unit |
|---|--------------------|---------|---------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 40 | 45 | V |
| RMS Reverse Voltage | V _{RMS} | 28 | 31.5 | V |
| DC Blocking Voltage | V _{DC} | 40 | 45 | V |
| Average Forward Output Current | I _{F(AV)} | 10 | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine wave | I _{FSM} | 150 | | A |

Thermal Characteristics

| Parameter | Symbol | D10PS40 | D10PS45 | Unit |
|--------------------------------------|------------------|------------|---------|------|
| Typical Thermal Resistance *1 | R _{θJA} | 60 | | °C/W |
| | R _{θJC} | 20 | | |
| | R _{θJL} | 15 | | |
| Operating Junction Temperature Range | T _J | -55 ~ +125 | | °C |
| Storage Temperature Range | T _{STG} | -55 ~ +150 | | °C |

Note *1: Device mounted on p.c.b. with 10 mm x 20 mm x 0.1 mm copper pad area

Schottky Barrier Rectifier

D10PS40 - D10PS45

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test Conditions | | Typ. | Max. | Unit |
|---|--------|--------------------|-----------------------------|------|------|---------------|
| Instantaneous Forward Voltage ^{*1} | V_F | $I_F = 10\text{A}$ | @ $T_A = 25^\circ\text{C}$ | - | 0.53 | V |
| Reverse Current ^{*2} | I_R | Rated V_R | @ $T_J = 25^\circ\text{C}$ | - | 200 | μA |
| | | | @ $T_J = 100^\circ\text{C}$ | - | 20 | mA |

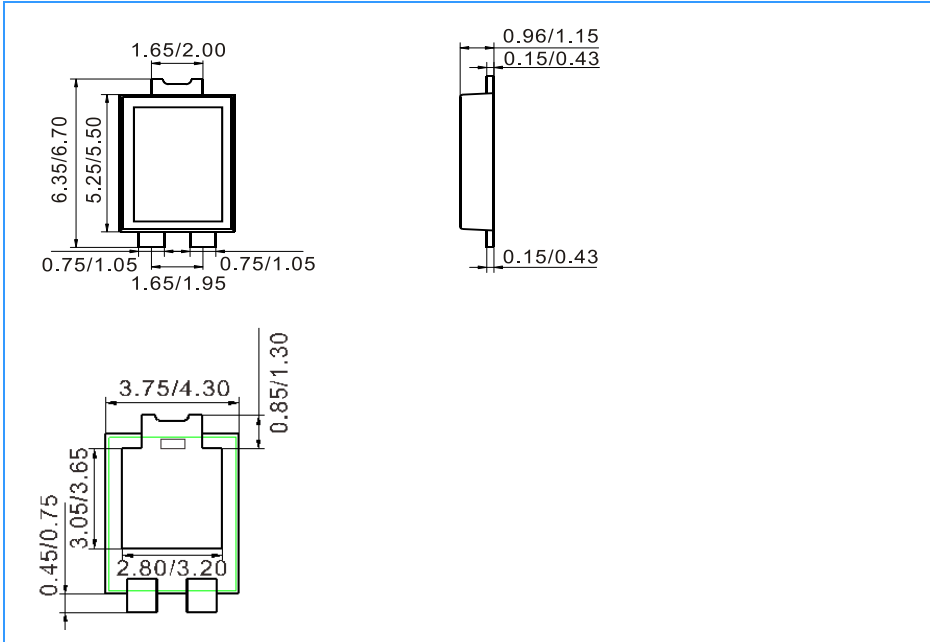
Note^{*1}: Pulse test: 300us pulse width, 1 % duty cycle

Note^{*2}: Pulse test: Pulse width 40ms

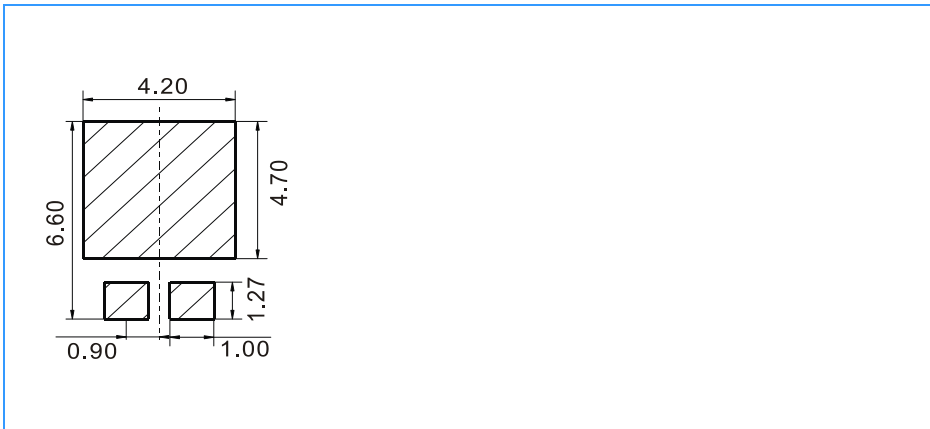
Schottky Barrier Rectifier

D10PS40 - D10PS45

Package Outline Dimensions (unit: mm)



Mounting Pad Layout (unit: mm)



Ordering Information

| Part Number | Marking | Package | Shipping Quantity |
|-------------|---------|---------|--------------------|
| D10PS40 | D10S40 | TO-277B | 4000 / Tape & Reel |
| D10PS45 | D10S45 | TO-277B | 4000 / Tape & Reel |