

DF40SC3L

Schottky Barrier Diodes
30V, 40A

Feature

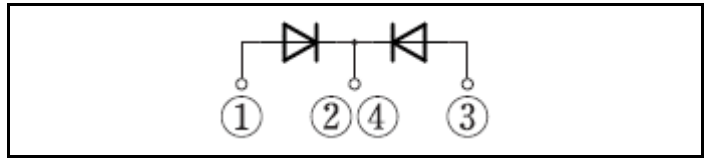
- SMD
- High Recovery Speed
- Low V_F
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): STO-220
Package (JEITA Code): SC-83 similar



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : $T_c=25^\circ\text{C}$)

| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------------------|------------|--|------------|------------------|
| Storage temperature | T_{stg} | | -55 to 150 | $^\circ\text{C}$ |
| Junction temperature | T_j | | 150 | $^\circ\text{C}$ |
| Repetitive peak reverse voltage | V_{RRM} | | 30 | V |
| Repetitive peak surge reverse voltage | V_{RRSM} | Pulse width 0.5ms, duty=1/40 | 35 | V |
| Average forward current | $I_F(AV)$ | 50Hz sine wave, Resistance load, Rating for each diode $I_F(AV)/2$, $T_c=112^\circ\text{C}$ | 40 | A |
| Surge forward current | I_{FSM} | 50Hz sine wave, Non-repetitive, 1 cycle, Peak value, $T_j=25^\circ\text{C}$ | 400 | A |
| Repetitive peak surge reverse power | P_{RRSM} | Pulse width 10 μs , $T_j=25^\circ\text{C}$, per diode | 1000 | W |

* :See the original Specifications

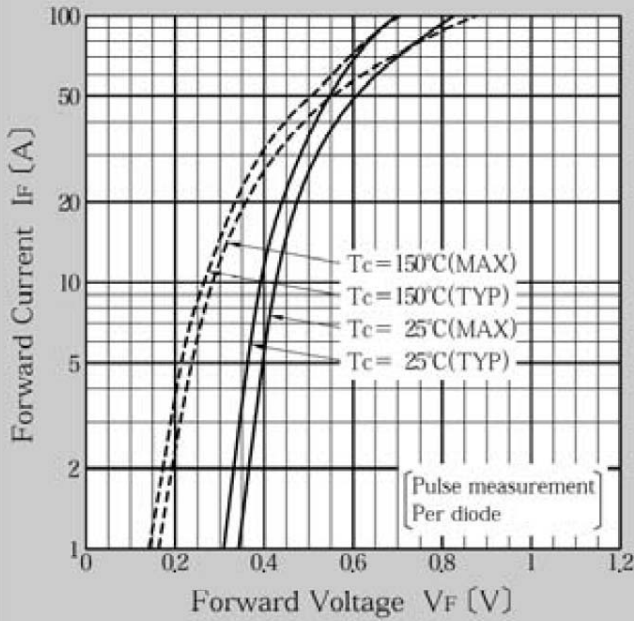
Electrical Characteristics (unless otherwise specified : Tc=25°C)

| Item | Symbol | Conditions | Ratings | | | Unit |
|--------------------|----------------------|---|---------|------|------|------|
| | | | MIN | TYP | MAX | |
| Forward voltage | V _F | I _F =15A, Pulse measurement, per diode | | | 0.45 | V |
| Reverse current | I _R | V _R =30V, Pulse measurement, per diode | | | 17 | mA |
| Total capacitance | C _t | f=1MHz, V _R =10V, per diode | | 1200 | | pF |
| Thermal resistance | R _{th(j-c)} | Junction to case | | | 1.5 | °C/W |

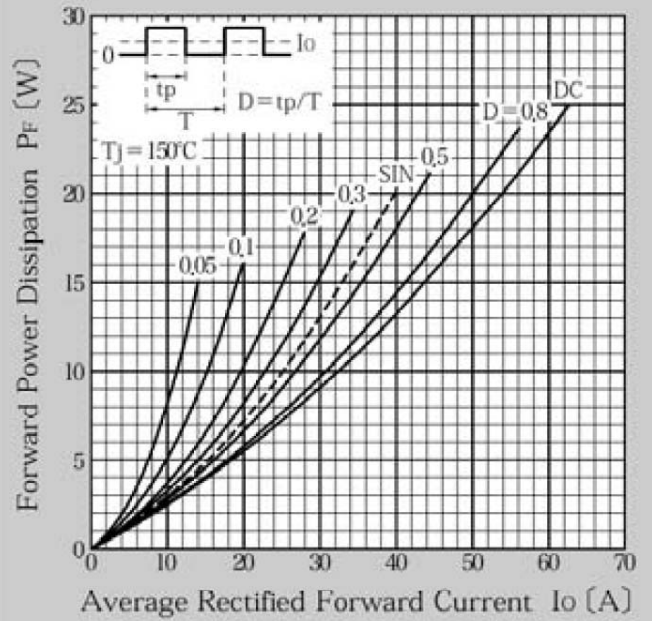
* : See the original Specifications

CHARACTERISTIC DIAGRAMS

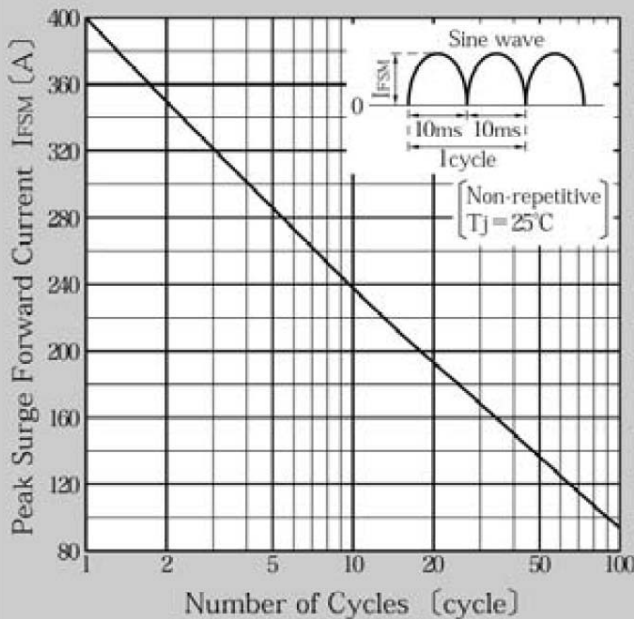
Forward Voltage



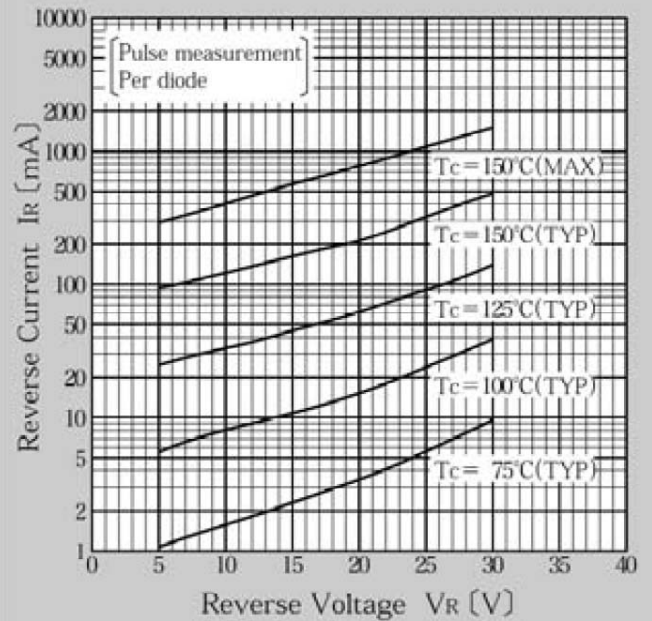
Forward Power Dissipation



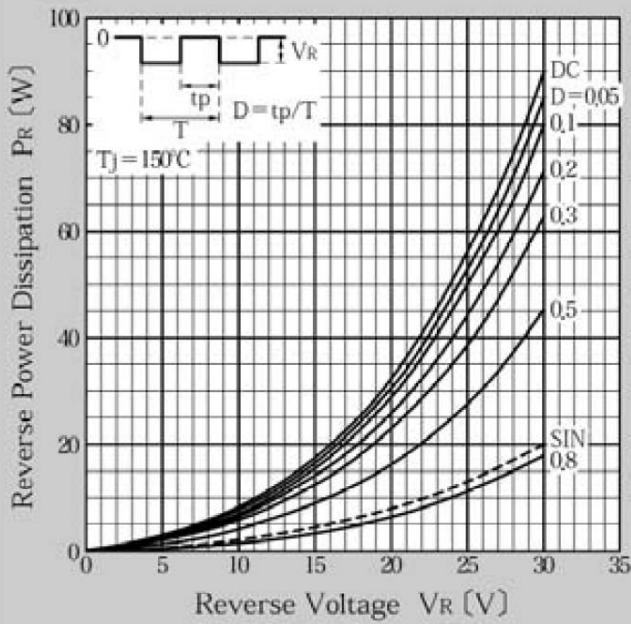
Peak Surge Forward Current Capability



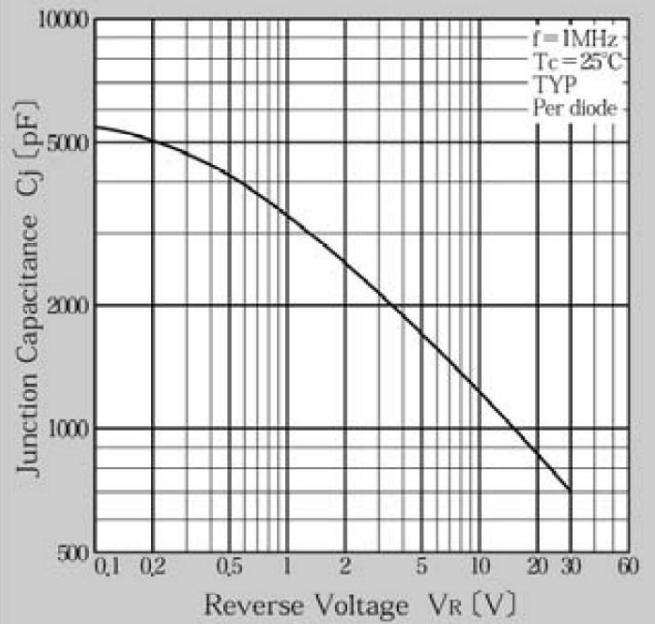
Reverse Current



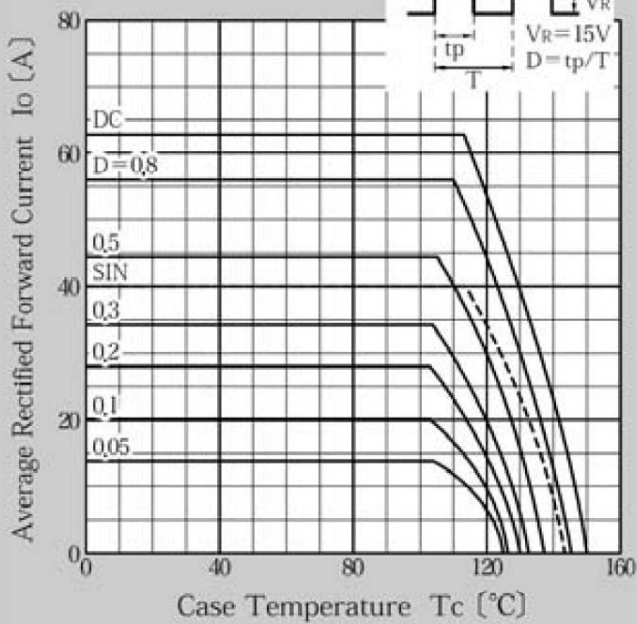
Reverse Power Dissipation



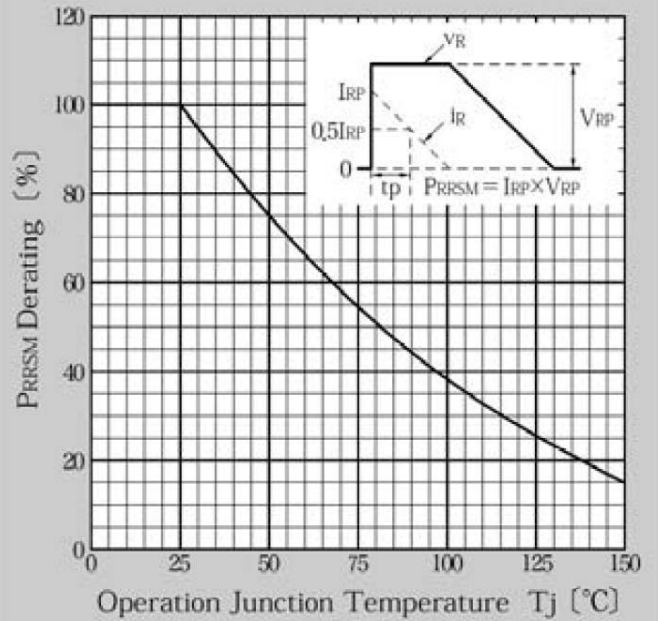
Junction Capacitance



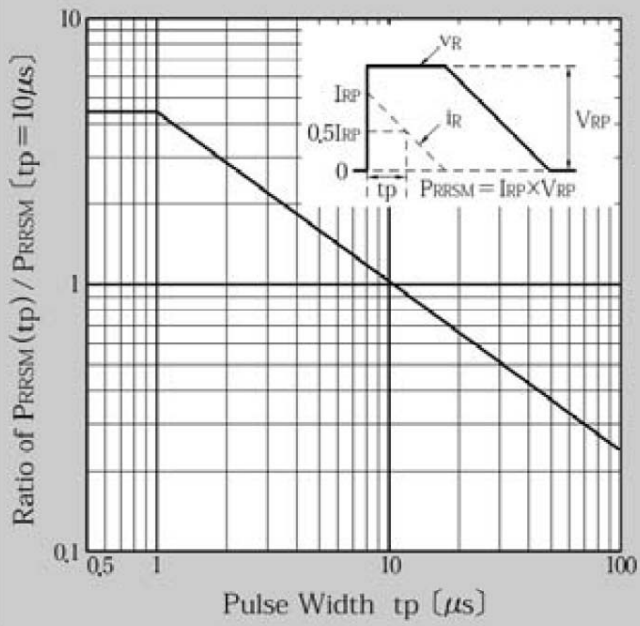
Derating Curve T_c - I_o



Repetitive Surge Reverse Power Derating Curve

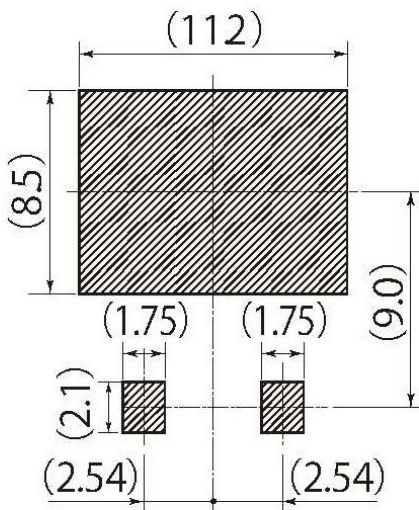
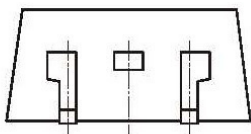
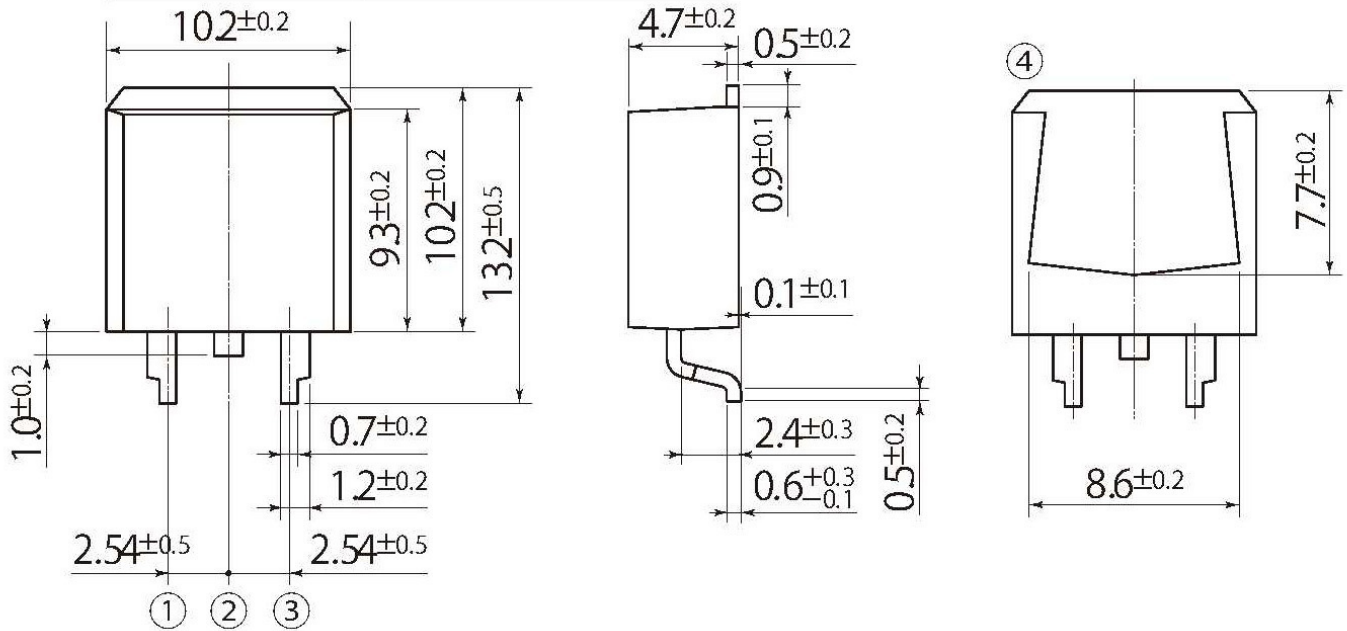


Repetitive Surge Reverse Power Capability



H1

| | |
|------------|---------------|
| JEDEC Code | - |
| JEITA Code | SC-83 similar |
| House Name | STO-220 |



Referential Soldering Pad

• Optimize soldering pad to the board design and soldering condition.

Notes

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