

D40FDC15ST

Schottky Barrier Diodes  
150V, 40A

Feature

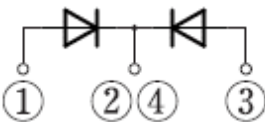
- SMD
- High Voltage
- Low  $I_R$
- Available for automotive use
- Pb free terminal
- RoHS:Yes

OUTLINE

Package (House Name): FD  
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            | $T_j$     |                                                                                                               | -55 to 150 | $^{\circ}\text{C}$ |
| Repetitive peak reverse voltage | $V_{RRM}$ |                                                                                                               | 150        | V                  |
| Average forward current         | $I_F(AV)$ | 50Hz sine wave, Resistance load, Rating for each diode $I_F(AV)/2$ , With heatsink, $T_c=103^{\circ}\text{C}$ | 40         | A                  |
| Surge forward current           | $I_{FSM}$ | 50Hz sine wave, Non-repetitive, 1cycle, Peak value, $T_j=25^{\circ}\text{C}$                                  | 400        | A                  |

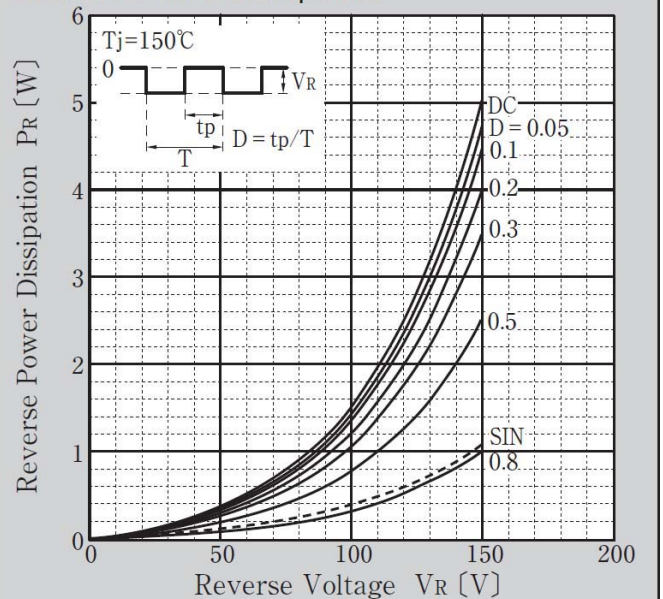
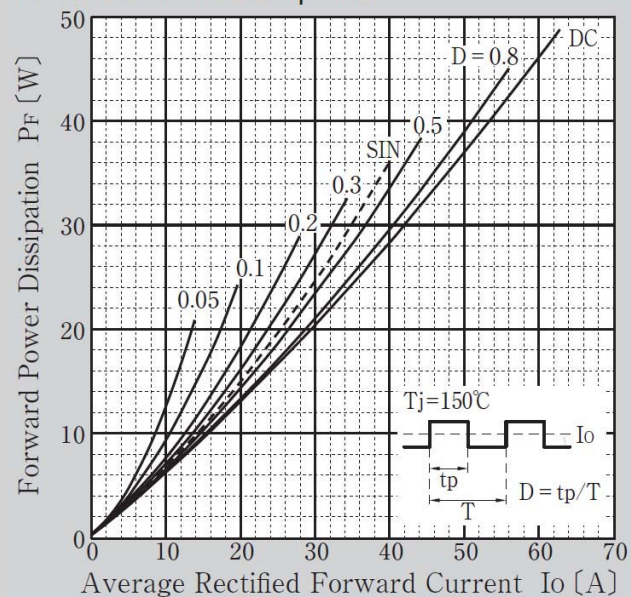
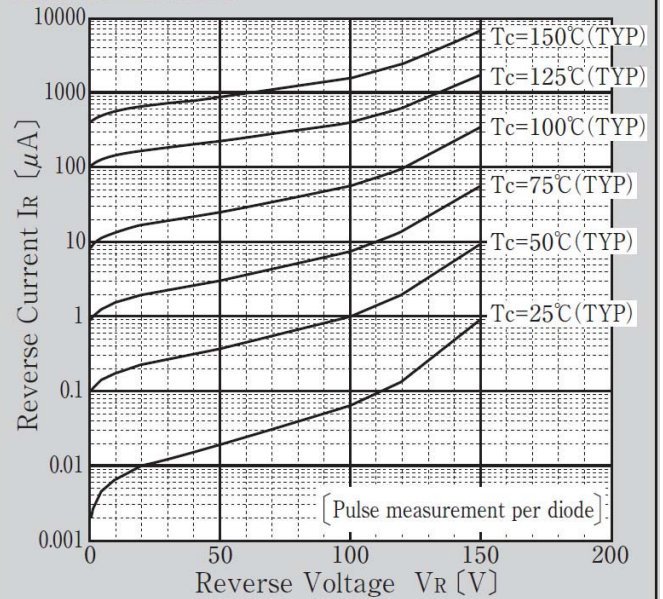
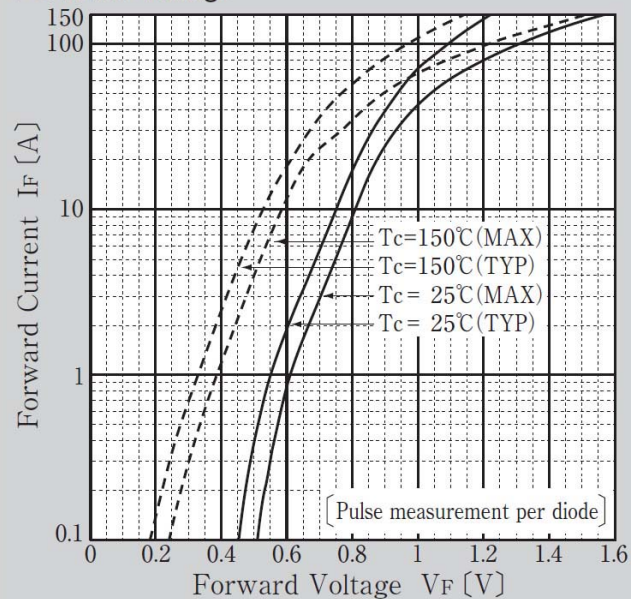
※ :See the original Specifications

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

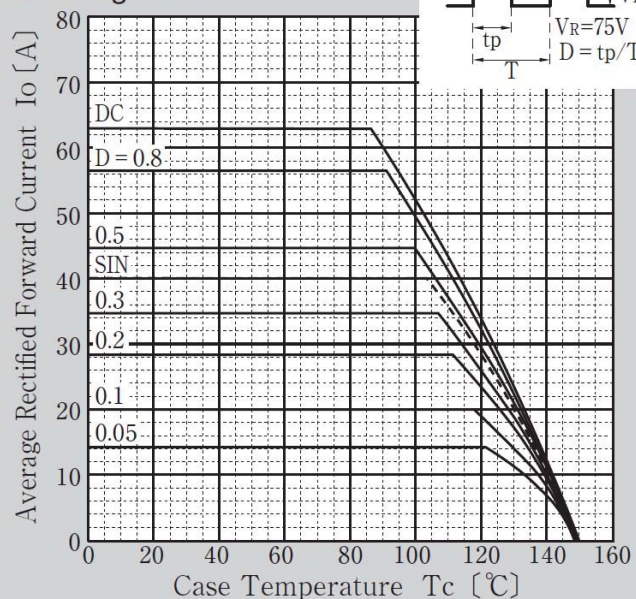
| Item               | Symbol        | Conditions                                       | Ratings |      |      | Unit                 |
|--------------------|---------------|--------------------------------------------------|---------|------|------|----------------------|
|                    |               |                                                  | MIN     | TYP  | MAX  |                      |
| Forward voltage    | $V_F$         | $I_F=20\text{A}$ , Pulse measurement, per diode  |         | 0.82 | 0.88 | V                    |
| Reverse current    | $I_R$         | $V_R=150\text{V}$ , Pulse measurement, per diode |         |      | 0.06 | mA                   |
| Total capacitance  | $C_t$         | $f=1\text{MHz}$ , $V_R=10\text{V}$ , per diode   |         | 315  |      | pF                   |
| Thermal resistance | $R_{th(j-c)}$ | Junction to case, With heatsink                  |         |      | 1.3  | $^{\circ}\text{C/W}$ |

※ :See the original Specifications

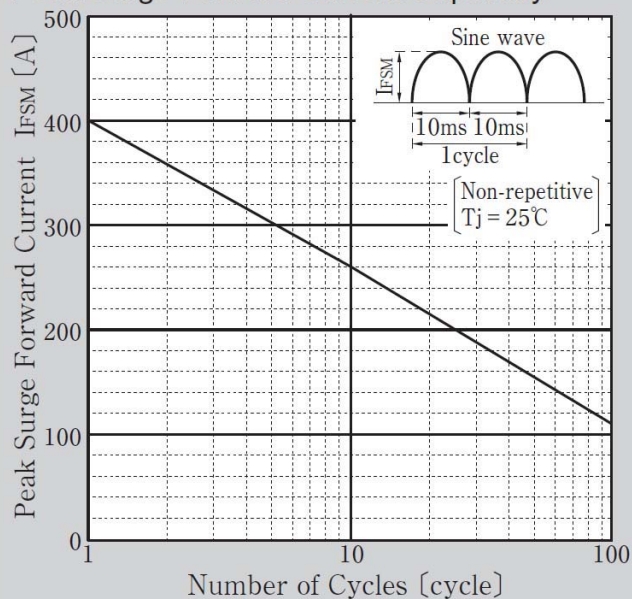
## CHARACTERISTIC DIAGRAMS



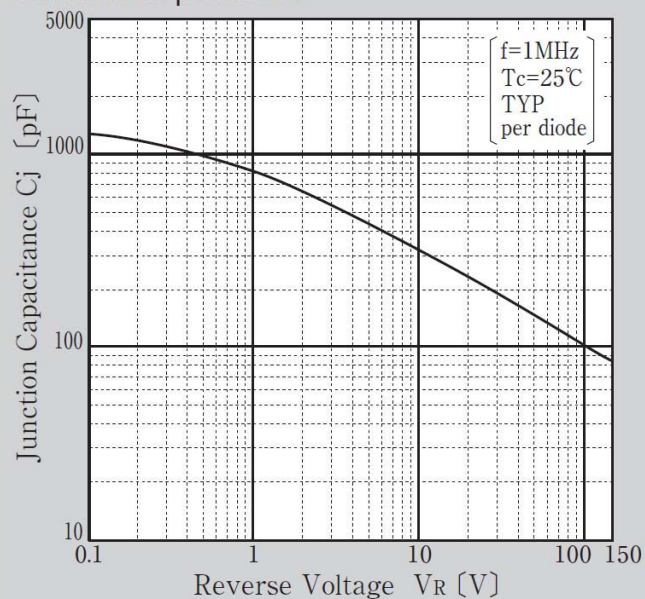
### Derating Curve



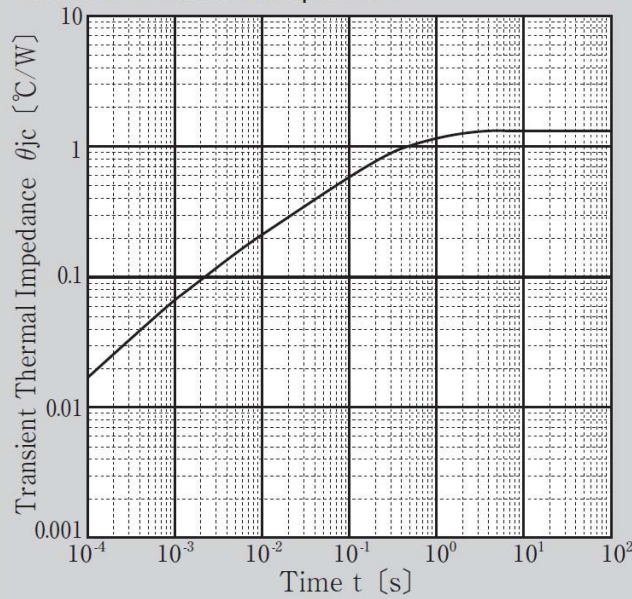
### Peak Surge Forward Current Capability



### Junction Capacitance

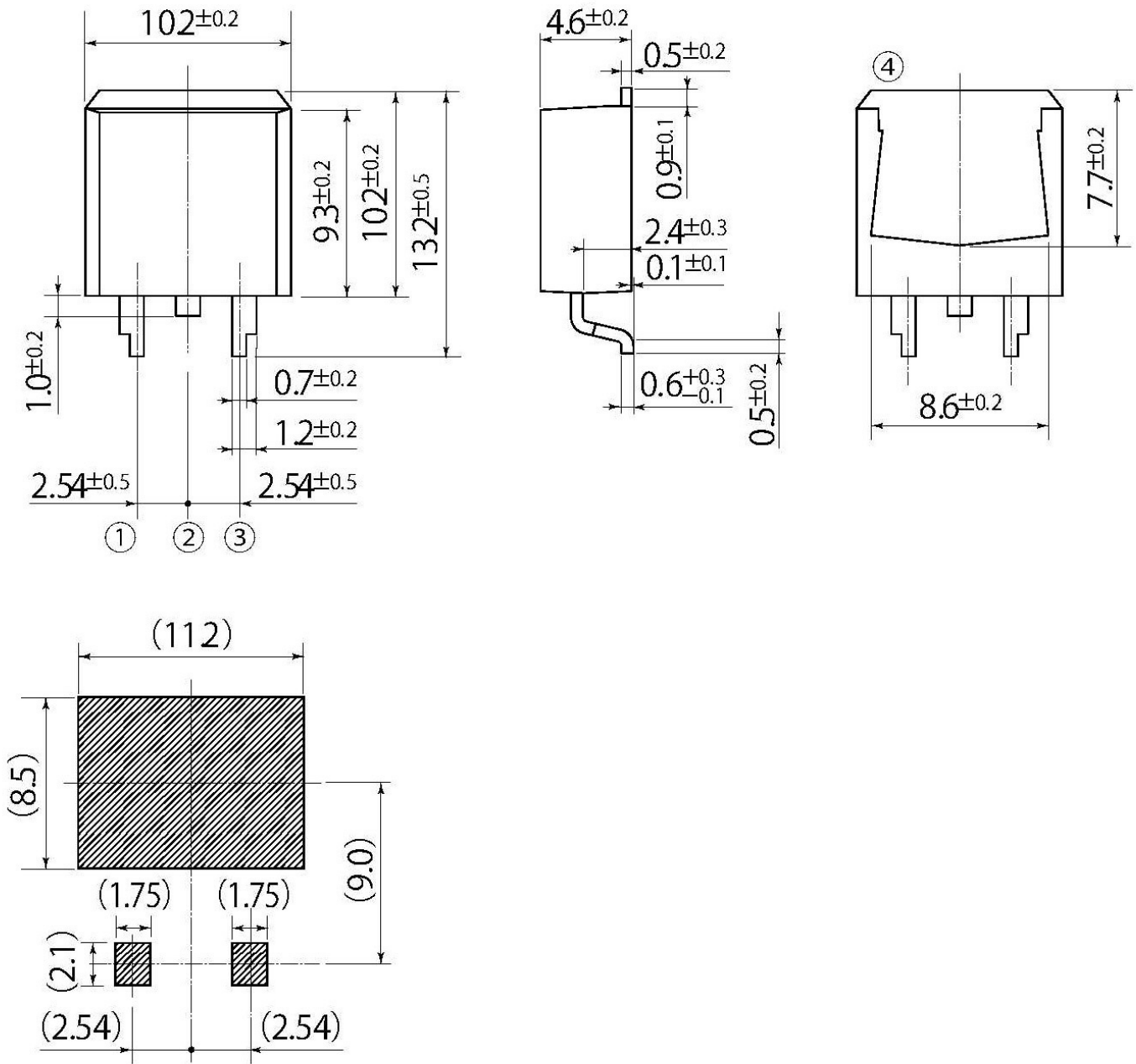


### Transient Thermal Impedance



H2

|            |               |
|------------|---------------|
| JEDEC Code | —             |
| JEITA Code | SC-83 similar |
| House Name | FD            |



Referential Soldering Pad

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

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