

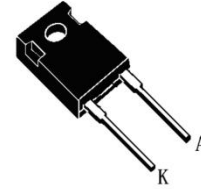
# ESTF60SS60US

## Fast Recovery Diode

### Features

- Repetitive Reverse Voltage :  $V_{RRM} = 600V$
- Forward Voltage Drop :  $V_F(\text{typ.}) = 1.5V$
- Average Forward Current :  $I_{F(AV)} = 60A$
- Fast Reverse Recovery Time :  $t_{rr}(\text{typ.}) = 45ns$
- RoHS product

TO-2472L



### Applications

- Switching Power Supplies
- Snubber diode
- Antiparalle Diode for high frequency Switching Devices



### Absolute Maximum Ratings @ $T_c=25^\circ C$

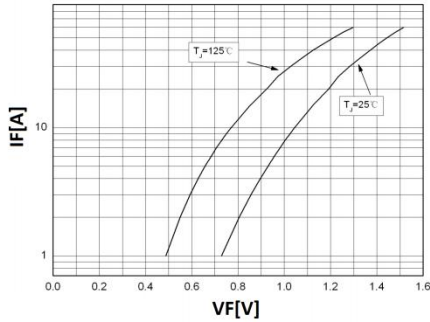
| Symbol      | Parameter                                   | ratings  | Unit       |
|-------------|---|----------|------------|
| $V_{RRM}$   | Repetitive peak reverse voltage @ $50\mu A$ | 600      | V          |
| $V_{RWM}$   | Working Peak Reverse Voltage                | 600      | V          |
| $I_{F(AV)}$ | Average forward current @ $T_c=100^\circ C$ | 60       | A          |
| $I_{FSM}$   | Peak one Cycle Surge Forward @ $t=10ms$     | 480      | A          |
| $T_j$       | Junction Temperature                        | -55~+175 | $^\circ C$ |
| $T_{STG}$   | Storage temperature range                   | -55~+175 | $^\circ C$ |

### Electrical Specifications @ $T_c=25^\circ C$

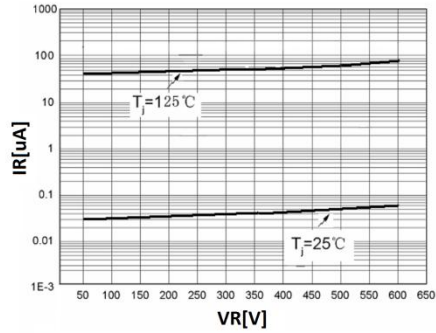
| Symbol        | Parameter                                |               | Ratings |     |      | Unit         |
|---------------|--|---------------|---------|-----|------|--------------|
|               |  |               | Min     | Typ | Max  |              |
| $I_R$         | $T_j=25^\circ C$                         | $V_R=V_{RRM}$ |         |     | 50   | $\mu A$      |
|               | $T_j=125^\circ C$                        |               |         |     | 800  | $\mu A$      |
| $V_F$         | $T_j=25^\circ C$                         | $I_F=60A$     |         | 1.5 | 2.4  | V            |
|               | $T_j=125^\circ C$                        |               |         |     | 2.1  | V            |
| $T_{rr}$      | $I_F=1A, V_R=30V, diF/dt=-200A/\mu s$    |               |         |     | 45   | ns           |
| $R_{th(j-c)}$ | Thermal resistance from junction to case | TO-247-2L     |         |     | 0.34 | $^\circ C/W$ |

Typical Performance Curves

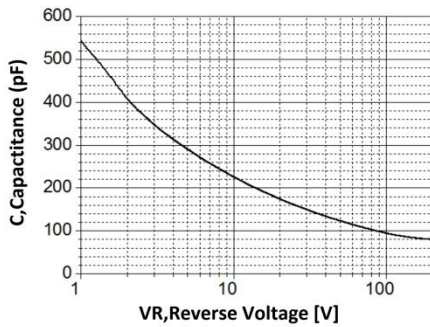
IF vs VF



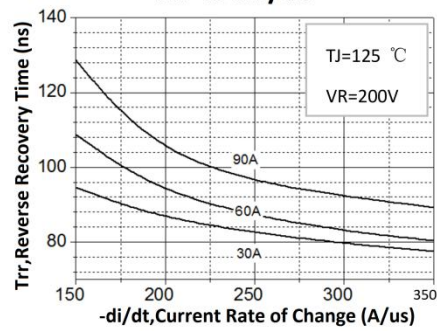
IR vs VR



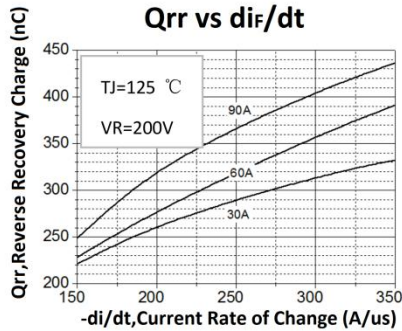
CT vs VR



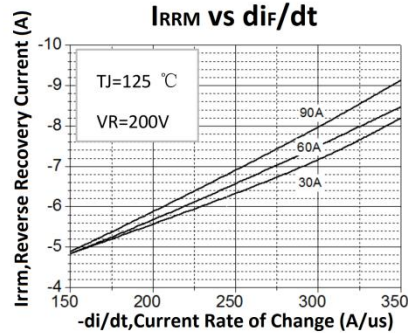
Trr vs di/dt



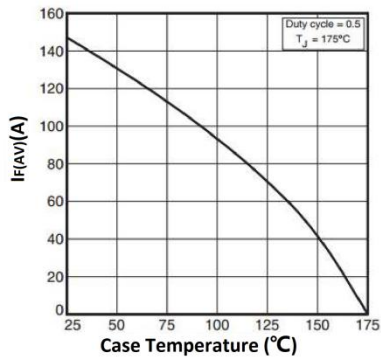
Qrr vs di/dt



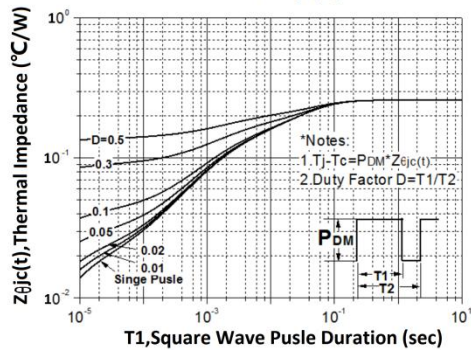
Irrm vs di/dt



IF vs TC



ZθJC vs tp(s)



Package

