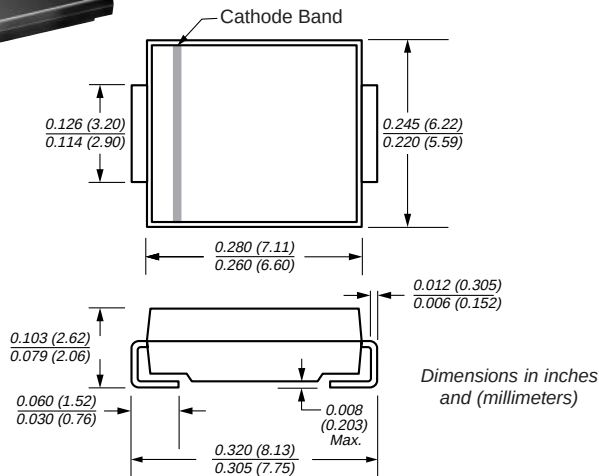
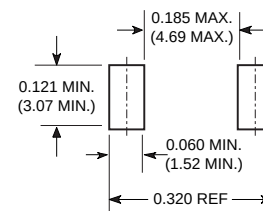


**Ultrafast Rectifiers****Reverse Voltage** 400 to 600V  
**Forward Current** 3.0A  
**Reverse Recovery Time** 50ns**DO-214AB (SMC)****Mounting Pad Layout****Mechanical Data****Case:** JEDEC DO-214AB molded plastic body over passivated chip**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026**Polarity:** Color band denotes cathode end**Weight:** 0.007oz., 0.21g**Features**

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultrafast recovery time for high efficiency
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

**Maximum Ratings & Thermal Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter                                                                                                                 | Symbol          | MURS340       | MURS360 | Unit |
|---------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|---------|------|
| Device Marking Codes                                                                                                      |                 | MG            | MJ      |      |
| Maximum repetitive peak reverse voltage                                                                                   | $V_{RRM}$       | 400           | 600     | V    |
| Working peak reverse voltage                                                                                              | $V_{RWM}$       | 400           | 600     | V    |
| Maximum DC blocking voltage                                                                                               | $V_{DC}$        | 400           | 600     | V    |
| Maximum average forward rectified current at:<br>(See figure 1)<br>$T_L = 130^\circ\text{C}$<br>$T_L = 115^\circ\text{C}$ | $I_{F(AV)}$     | 3.0<br>4.0    |         | A    |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)                         | $I_{FSM}$       | 125           |         | A    |
| Typical thermal resistance junction to ambient                                                                            | $R_{\theta JL}$ | 11            |         | °C/W |
| Operating junction and storage temperature range                                                                          | $T_J, T_{STG}$  | -65 to +175°C |         | °C   |

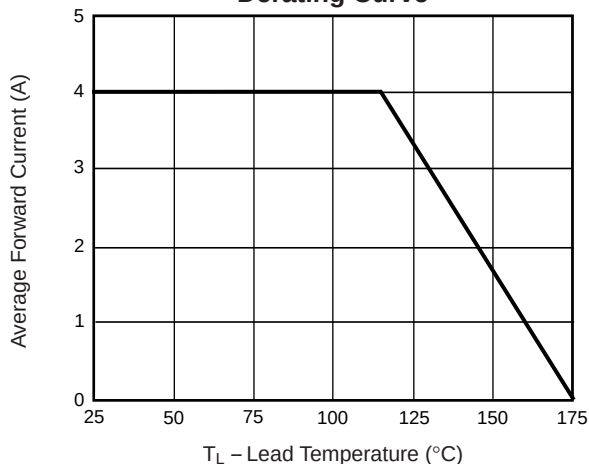
**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

|                                                                                                                       |                                                                                                                                            |          |                      |    |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------|----|
| Maximum instantaneous forward voltage <sup>(1)</sup>                                                                  | $I_F = 3.0\text{A}, T_J = 25^\circ\text{C}$<br>$I_F = 4.0\text{A}, T_J = 25^\circ\text{C}$<br>$I_F = 3.0\text{A}, T_J = 150^\circ\text{C}$ | $V_F$    | 1.25<br>1.28<br>1.05 | V  |
| Maximum instantaneous reverse current at rated DC blocking voltage <sup>(1)</sup>                                     | $T_J = 25^\circ\text{C}$<br>$T_J = 150^\circ\text{C}$                                                                                      | $I_R$    | 10<br>250            | μA |
| Maximum reverse recovery time at $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$                              |                                                                                                                                            | $t_{rr}$ | 50                   | ns |
| Maximum reverse recovery time at, $I_F=1.0\text{A}, di/dt=50\text{A}/\mu\text{s}, V_R=30\text{V}, I_{rr}=10\% I_{RM}$ |                                                                                                                                            | $t_{rr}$ | 75                   | ns |
| Maximum forward recovery time $I_F=1.0\text{A}, di/dt=100\text{A}/\mu\text{s}, \text{Rec. to } 1.0\text{V}$           |                                                                                                                                            | $t_{fr}$ | 25                   | ns |

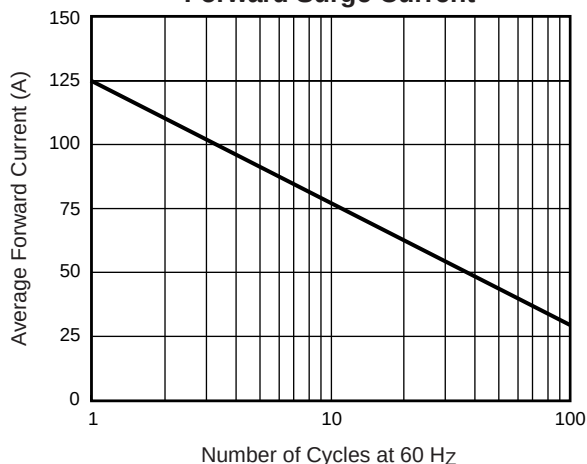
**Note:** (1) Pulse test:  $t_p = 300\mu\text{s}$ , duty cycle  $\leq 2\%$

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

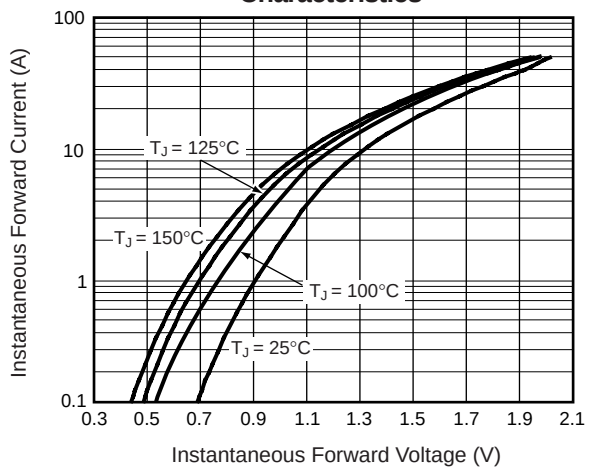
**Fig. 1 – Forward Current Derating Curve**



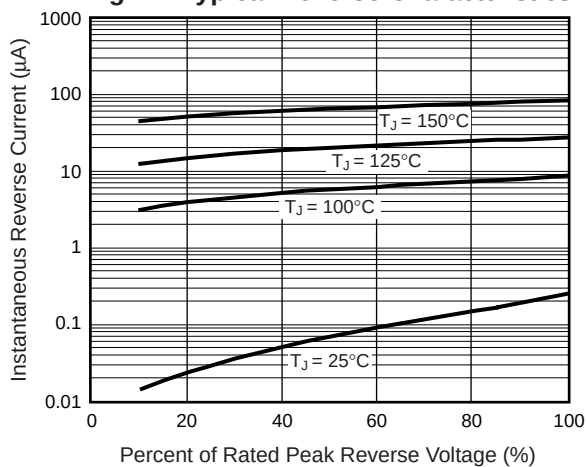
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



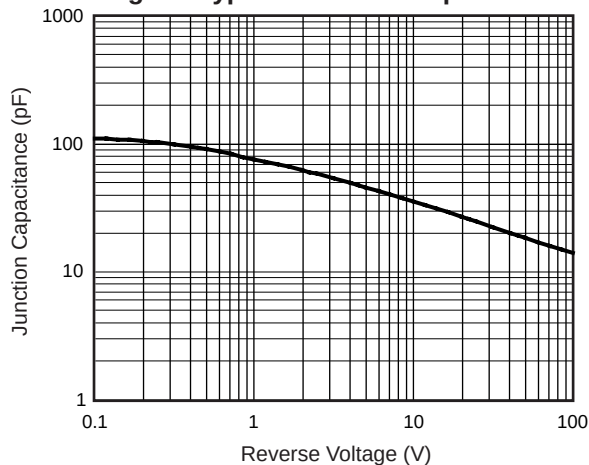
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Typical Junction Capacitance**



**Fig. 6 – Typical Reverse Switching Characteristics**

