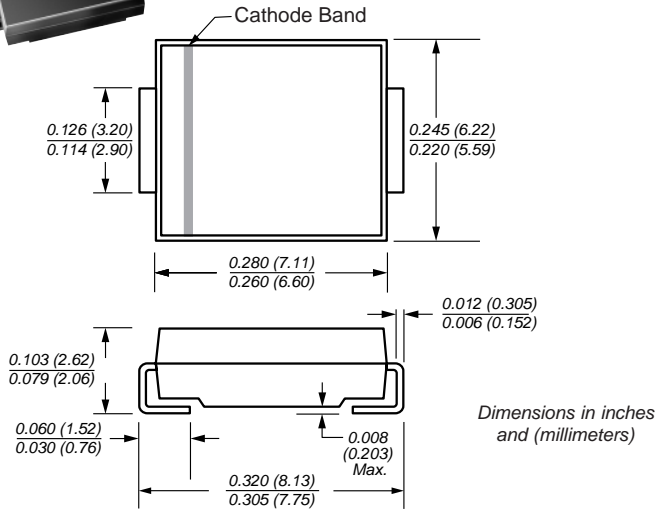
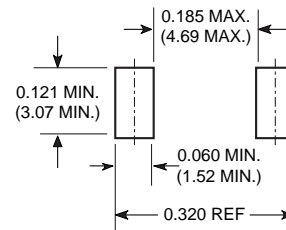


**Ultrafast Rectifier****DO-214AB (SMC)****Reverse Voltage** 200V  
**Forward Current** 3.0A  
**Reverse Recovery Time** 25ns**Mounting Pad Layout****Mechanical Data****Case:** JEDEC DO-214AB molded plastic body over passivated chip**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026**Polarity:** Color band denotes cathode end**Weight:** 0.007 ounce, 0.21 gram**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	MURS320	Unit
Device Marking Codes		MD	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	V
Working peak reverse voltage	V <sub>RWM</sub>	200	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	V
Maximum average forward rectified current at: T <sub>L</sub> = 140°C (See figure 1)	I <sub>F(AV)</sub>	3.0 4.0	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	125	A
Typical thermal resistance junction to ambient	R <sub>θJL</sub>	11	°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175°C	°C

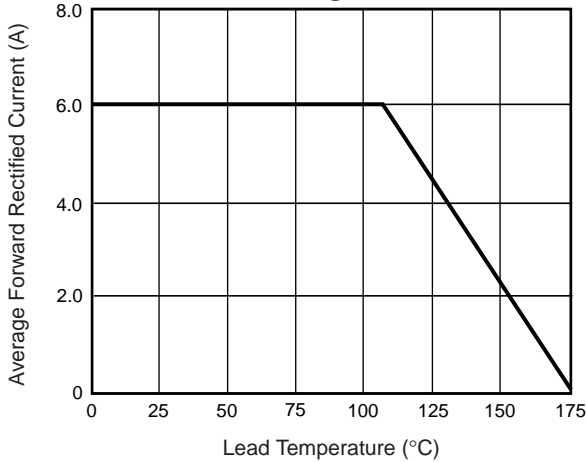
**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage <sup>(1)</sup>	at I <sub>F</sub> = 3.0A, T <sub>J</sub> = 25°C at I <sub>F</sub> = 4.0A, T <sub>J</sub> = 25°C at I <sub>F</sub> = 3.0A, T <sub>J</sub> = 150°C	V <sub>F</sub>	0.875 0.890 0.710	V
Maximum instantaneous reverse current at rated DC blocking voltage <sup>(1)</sup>	T <sub>J</sub> = 25°C T <sub>J</sub> = 150°C	I <sub>R</sub>	5.0 150	μA
Maximum reverse recovery time at I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A		t <sub>rr</sub>	25	ns
Maximum reverse recovery time at: I <sub>F</sub> = 1.0A, di/dt = 50A/μs, V <sub>R</sub> = 30V, I <sub>rr</sub> = 10% I <sub>RM</sub>		t <sub>rr</sub>	35	ns
Maximum forward recovery time I <sub>F</sub> = 1.0A, di/dt = 100A/μs, Rec. to 1.0V		t <sub>fr</sub>	25	ns

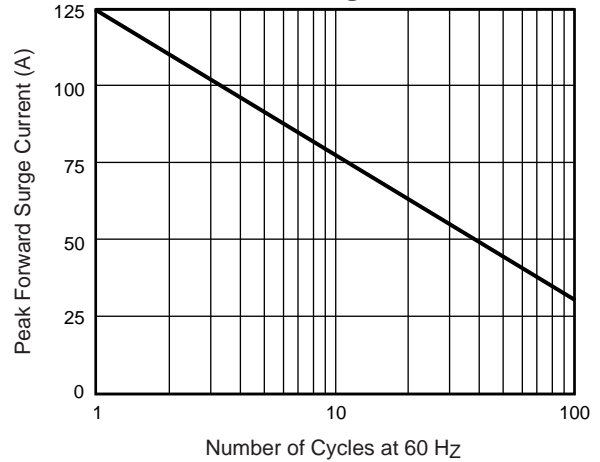
**Notes:** (1) Pulse test: t<sub>p</sub> = 300μs, duty cycle ≤ 2%

**Ratings and  
Characteristic Curves**

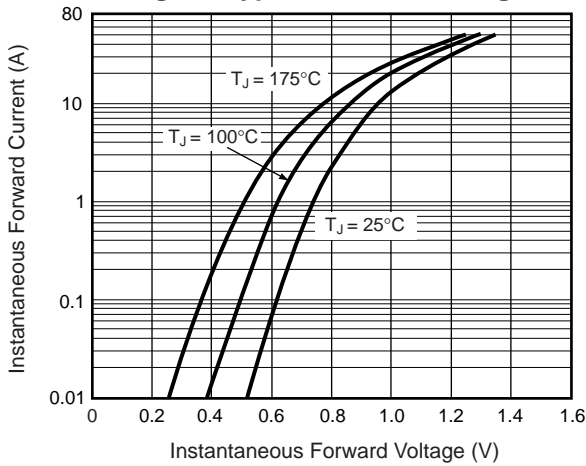
**Fig. 1 – Forward Current  
Derating Curve**



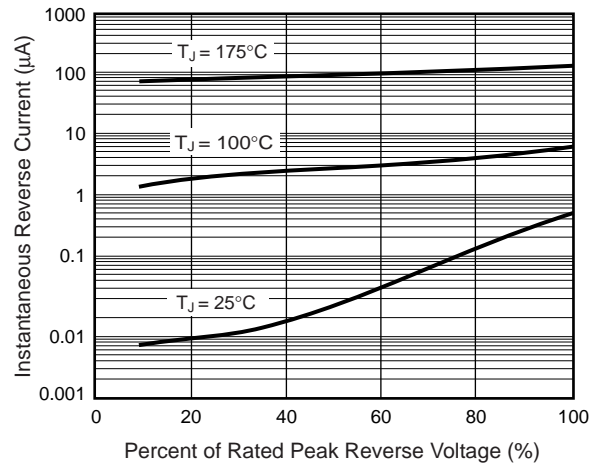
**Fig. 2 – Maximum Non-Repetitive Peak  
Forward Surge Current**



**Fig. 3 – Typical Forward Voltage**



**Fig. 4 – Typical Reverse Leakage  
Characteristics**



**Fig. 5 – Typical Junction Capacitance**

