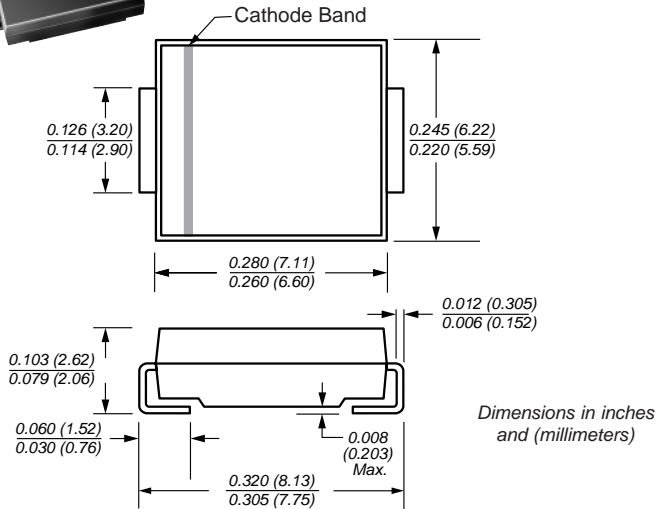
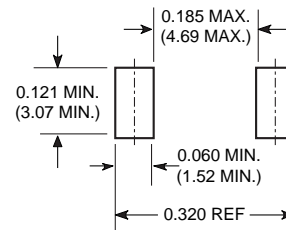


**Ultrafast Rectifier**

Reverse Voltage 200V
Forward Current 3.0A
Reverse Recovery Time 25ns

**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: 0.007 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 _{RRM}	200	V
Working peak reverse voltage	V _{RWM}	200	V
Maximum DC blocking voltage	V _{DC}	200	V
Maximum average forward rectified current at: T _L = 140°C (See figure 1)	I _{F(AV)}	3.0 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 _{θJL}	11	°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175°C	°C

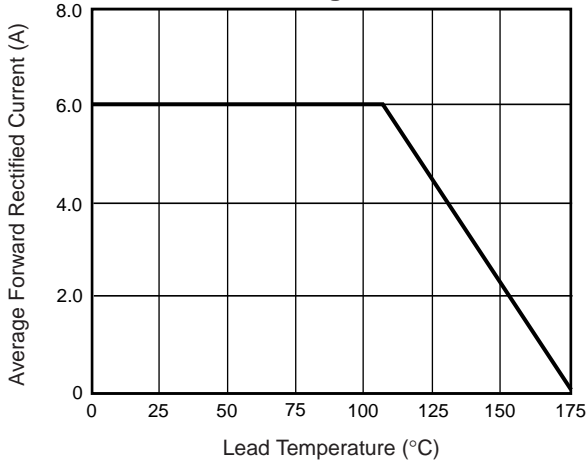
Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

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

Notes: (1) Pulse test: t_p = 300μs, duty cycle ≤ 2%

**Ratings and
Characteristic Curves**

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



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

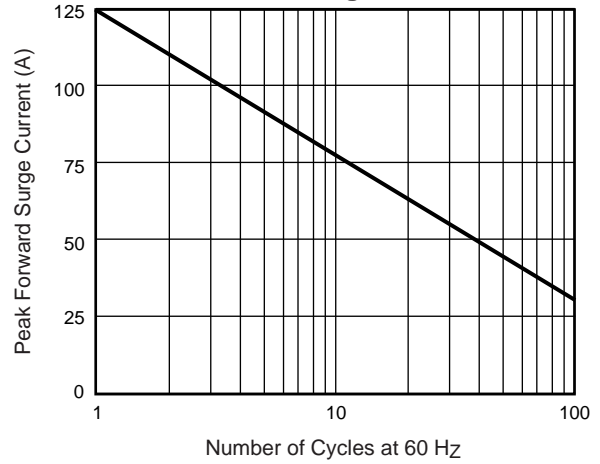
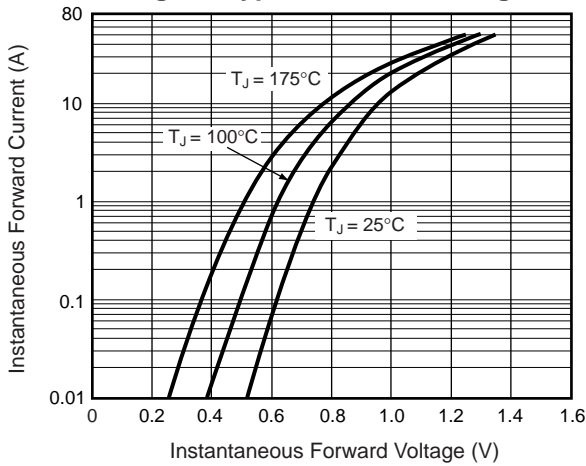


Fig. 3 – Typical Forward Voltage



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

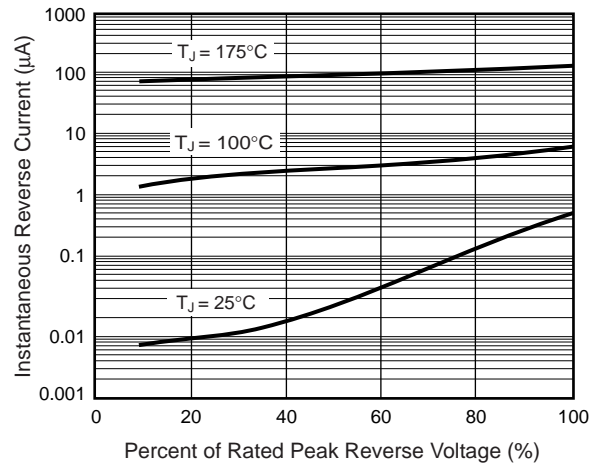


Fig. 5 – Typical Junction Capacitance

