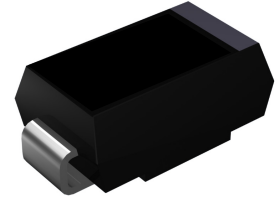


Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power as a free wheeling diode
- Ultrafast recovery time for high efficiency
- For surface mounted applications
- Class passivated junction
- High temperature soldering guaranteed: 260°C/10 seconds at terminals



Package: DO-214AB (SMC)



Mechanical Data

- Case: JEDEC DO-214AB (SMC) molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end

Maximum Ratings (T_A = 25°C unless otherwise noted)

Parameter	Symbol	MURS440	MURS460	Unit
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 (See Fig.1)	I _{F(AV)}	4.0		A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I _{FSM}	125		A
Operating Junction and Storage Temperature Range	T _J , T _{STG}	- 55 to + 175		°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	MURS440	MURS460	Unit
Maximum Instantaneous Forward Voltage	4A	V _F	1.28		V
Maximum DC Reverse Current at rated DC Blocking Voltage	T _J =25°C	I _R	10		μA
	T _J =150°C		250		
Maximum Reverse Recovery Time	I _F =0.5A, I _R =1A, I _{tr} =0.25A	t _{rr}	50		ns
Maximum Reverse Recovery Time	I _F =1.0A di/dt=50A/μs V _R =30V, I _{tr} =10%I _{RM}	t _{rr}	75		ns
Maximum Reverse Recovery Time	I _F =1.0A, di/dt=100A/μs recovery to 1.0V	t _{rr}	50		ns
Typical Thermal Resistance ¹⁾	Junction-Amb	R _{θJA}	34		°C/W
	Junction-Case	R _{θJC}	17		
	Junction-Lead	R _{θJL}	10		
Junction Capacitance	4.0V, 1 MHz	C _J	70		pF

Note1) The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 30×30mm copper pads.

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

Fig. 1 – Forward Current Derating Curve

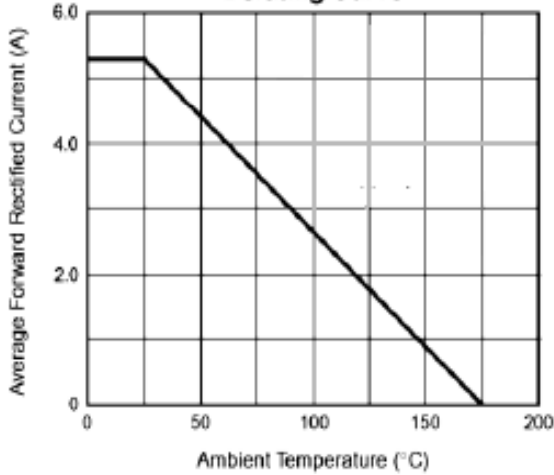


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

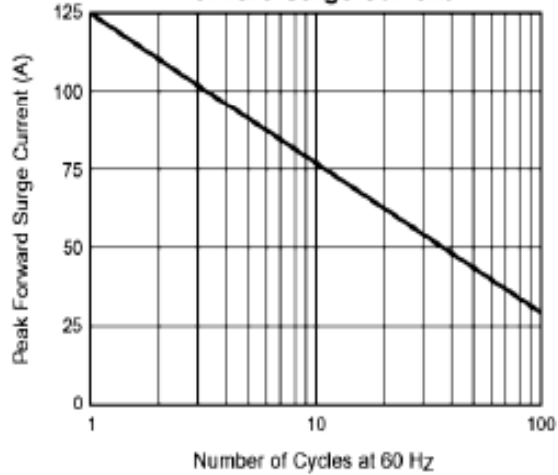


Fig. 3 – MURS460 Typical Instantaneous Forward Characteristics

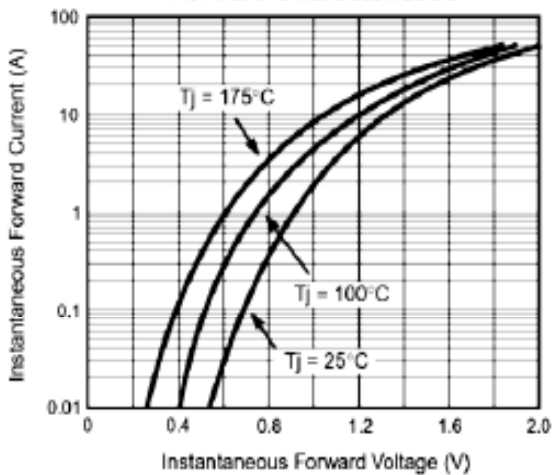


Fig. 4 – MURS460 Typical Reverse Characteristics

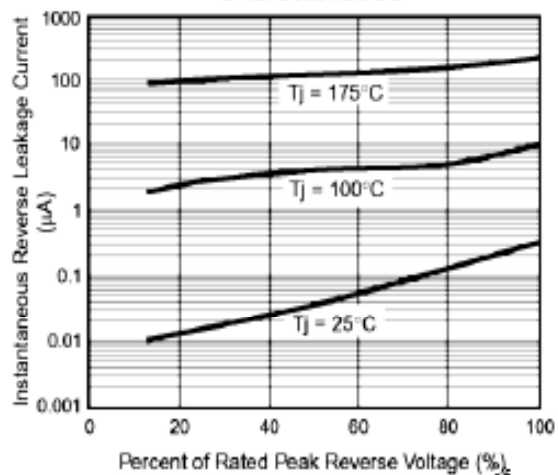
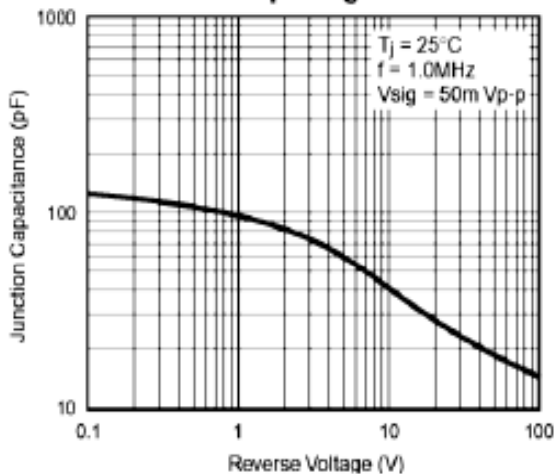


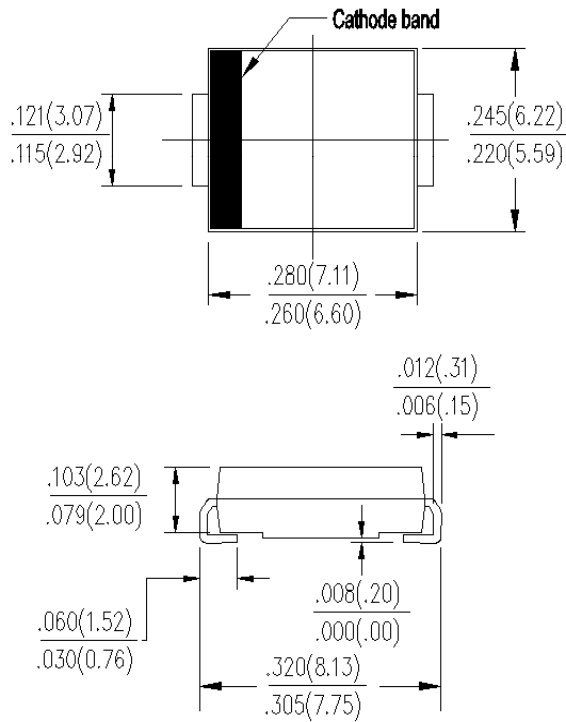
Fig. 5 – Typical Junction Capacitance per Leg



Package Outline Dimensions

in inches (millimeters)

DO-214AB (SMC)



Mounting Pad Layout

