

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as a free wheeling diode
- Ultrafast recovery time for high efficiency
- For surface mount applications
- Glass passivated junction
- High temperature soldering guaranteed: 260°C/10Seconds on terminals



DO-214AA(SMB)

Mechanical Data

- Case: JEDEC DO-214AA (SMB) molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026



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

Parameter	Symbol	MURS120	Unit
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 TL (See Fig.1)	T _L =150°C	I _{F(AV)} 1.0	A
	T _L =125°C	2.0	
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	I _{FSM}	40	A
Operating Junction Temperature Range	T _J	- 55 to + 150	°C
Storage Temperature Range	T _{STG}	- 55 to + 150	°C

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

Parameter	Symbol	Test Conditions	MURS120	Unit
Maximum Instantaneous Forward Voltage	V _F	I _F =1.0A, T _J =25°C	0.875	Volts
		I _F =1.0A, T _J =150°C	0.71	
Maximum DC reverse Current at Rated DC Blocking Voltage	I _R	T _A =25°C	2.0	μA
		T _A =125°C	50	
Typical Reverse Recovery Time	t _{rr}	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	25	nS
		I _F =1.0A, di/dt=50A/uS, V _R =30V, I _{rr} =10%I _{RM}	35	nS
		I _F =1.0A, di/dt=100A/uS, Recovery to 1.0V	25	nS
Typical Thermal Resistance ¹	R _{θJA}	Junction to Ambient	85	°C/W
	R _{θJC}	Junction to Case	15	
	R _{θJL}	Junction to Lead	20	

Note:

1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 8.0×8.0mm copper pads.

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

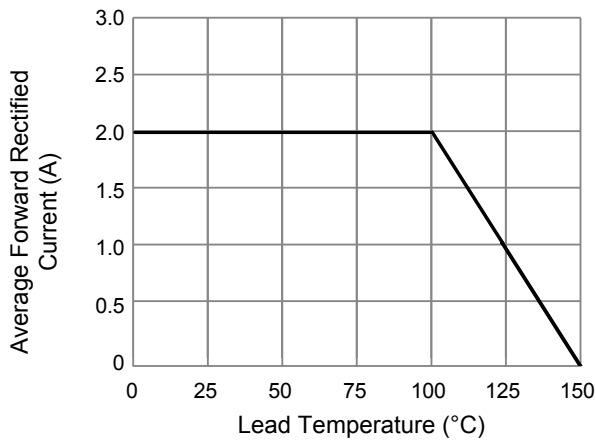


Figure 1. Forward Current Derating Curve

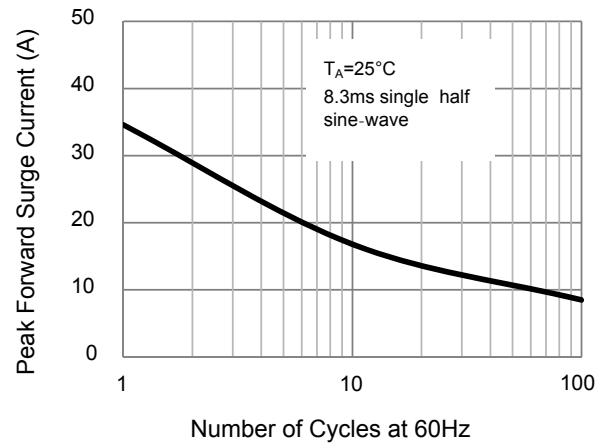


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

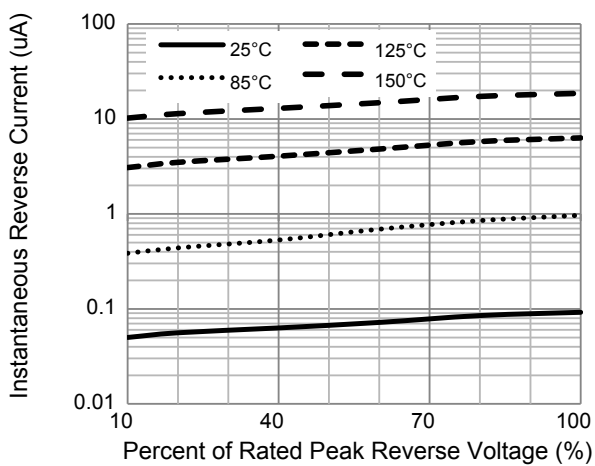


Figure 3. Typical Reverse Characteristics

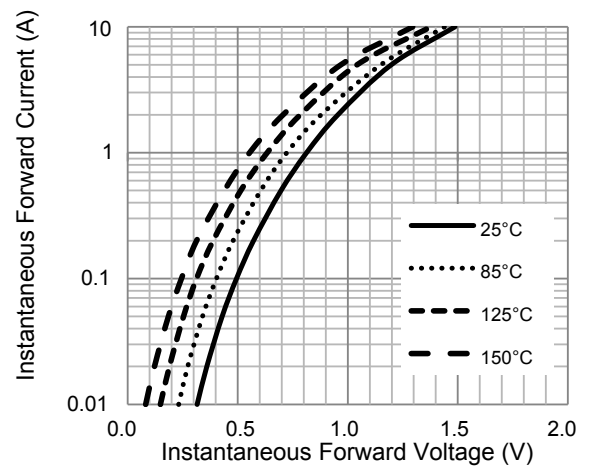


Figure 4. Typical Forward Characteristics

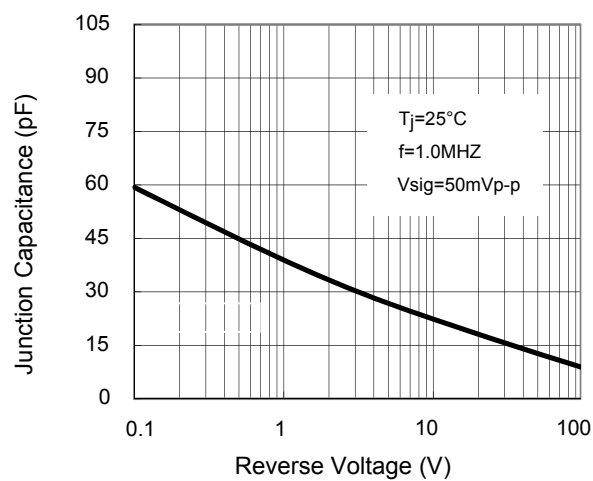
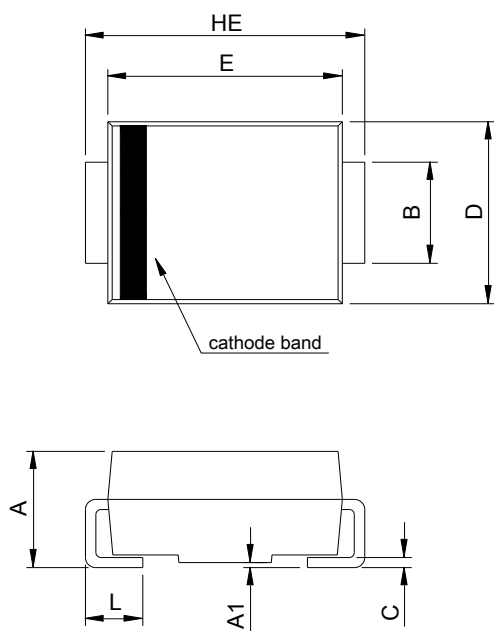


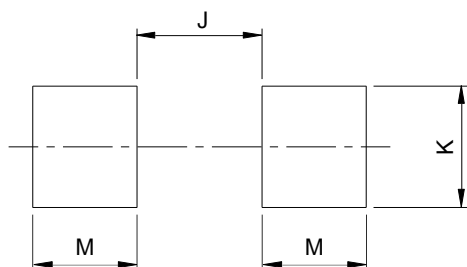
Figure 5. Typical Junction Capacitance

Package Outline Dimensions (SMB)



SMB (DO-214AA)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.95	2.65	0.077	0.104
A1	0.00	0.20	0.000	0.008
B	1.95	2.20	0.077	0.087
C	0.15	0.31	0.006	0.012
D	3.30	3.95	0.130	0.156
E	4.06	4.60	0.160	0.181
HE	5.10	5.60	0.201	0.220
L	0.76	1.60	0.030	0.063

Recommended Pad Layout



Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.60	-	0.102
K	2.20	-	0.087	-
M	1.80	-	0.071	-