



MURS120

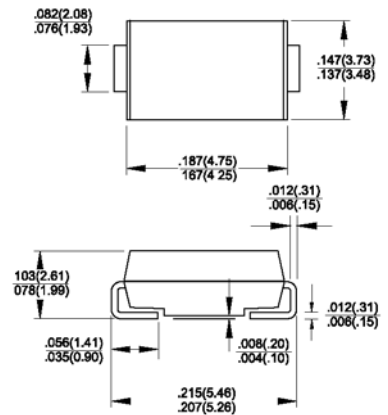
Ultrafast Plastic Rectifier
Reverse Voltage 200 Volts Forward Current 1.0 Ampere

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: 250°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
- ◆ Polarity: Color band denotes cathode end
- ◆ Weight: 0.003 ounce, 0.093 gram

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	MURS120	Units
Maximum repetitive peak reverse voltage	V_{RRM}	200	Volts
Working peak reverse voltage	V_{RWM}	200	Volts
Maximum DC blocking voltage	V_{DC}	200	Volts
Maximum average forward rectified current at (See figure 1)	$I_{F(AV)}$	1.0 2.0	Amps
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	40.0	Amps
Maximum instantaneous forward voltage (Note 1)	V_F	0.875 0.710	Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1)	I_R	2.0 200	μ A μ A
Maximum reverse recovery time at $I_F=0.5A$, $I_R=1.0A$, $I_{tr}=0.25A$	t_{rr}	25	nS
Maximum reverse recovery time at $I_F=1.0A$, $di/dt=50A/\mu s$, $V_R=30V$, $I_R=10\% I_{RM}$	t_{rr}	35	nS
Maximum forward recovery time at $I_F=1.0A$, $di/dt=100A/\mu s$, recovery to 1.0V	t_{fr}	25	nS
Typical thermal resistance junction to ambient	$R_{\theta JA}$	13	°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +175	°C

Notes: 1. Pulse test: $t_p=300\mu s$, duty cycle < 2%

RATINGS AND CHARACTERISTIC CURVES

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

Fig. 1 – Forward Current Derating Curve

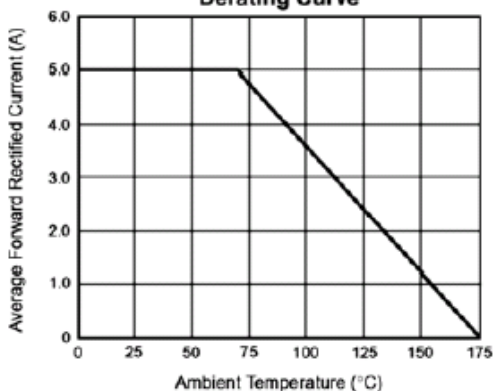


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

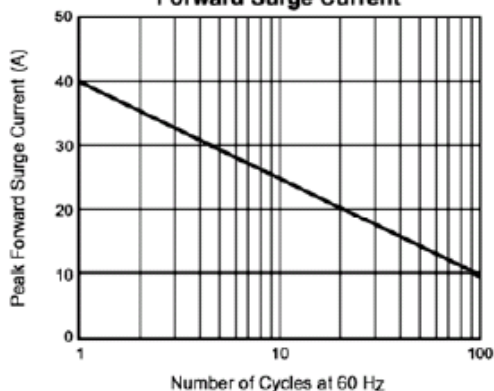


Fig. 3 – Typical Instantaneous Forward Characteristics

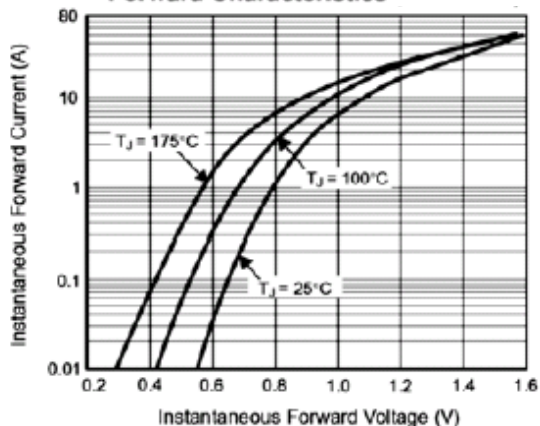


Fig. 4 – Typical Reverse Leakage Characteristics

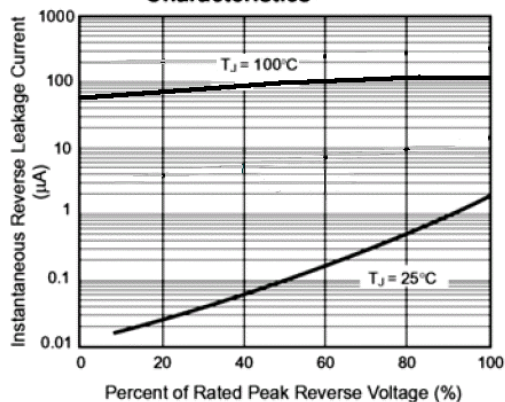


Fig. 5 – Typical Junction Capacitance

