Preferred Device

Surface Mount Ultrafast Power Rectifiers

Ideally suited for high voltage, high frequency rectification, or as free wheeling and protection diodes in surface mount applications where compact size and weight are critical to the system.

- Small Compact Surface Mountable Package with J-Bend Leads
- Rectangular Package for Automated Handling
- High Temperature Glass Passivated Junction
- Low Forward Voltage Drop (0.74 Volts Max @ 2.0 A, T_J = 150°C)

Mechanical Characteristics:

- Case: Epoxy, Molded
- Weight: 95 mg (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Shipped in 12 mm Tape and Reel, 2500 units per reel
- Polarity: Polarity Band Indicates Cathode Lead
- Marking: U2A, U2B



ON Semiconductor

http://onsemi.com

ULTRAFAST RECTIFIERS 2 AMPERES 50-100 VOLTS



SMB CASE 403A





x = A (205T3)B (210T3)

ORDERING INFORMATION

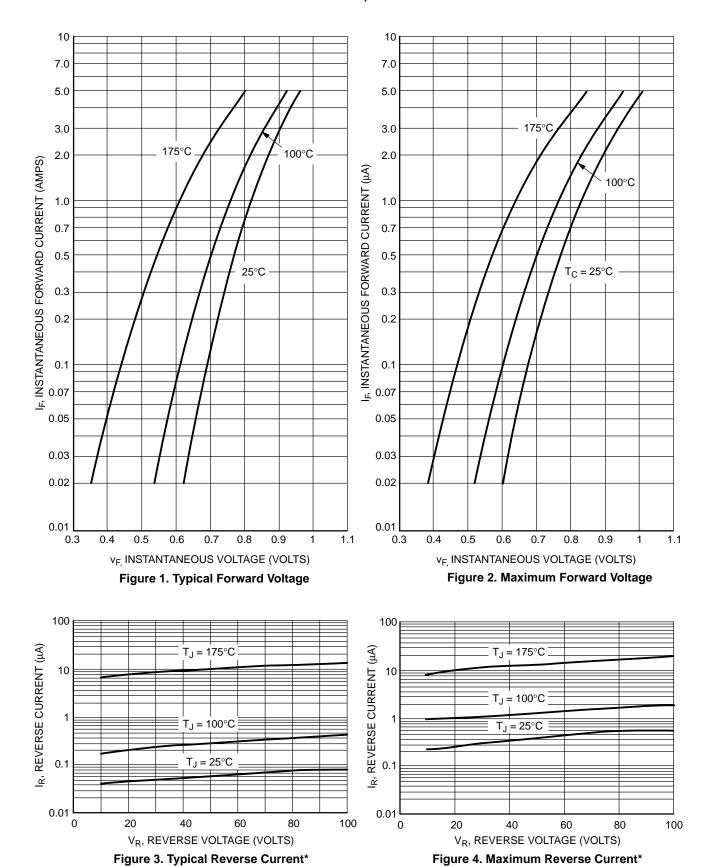
Device	Package	Shipping	
MURS205T3	SMB	2500 Tape & Reel	
MURS210T3	SMB	2500 Tape & Reel	

Preferred devices are recommended choices for future use and best overall value.

MAXIMUM RATINGS

		MURS		
Rating	Symbol	205T3	210T3	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	50	100	Volts
Average Rectified Forward Current	I _{F(AV)}	1.0 @ T _L = 150°C 2.0 @ T _L = 125°C		Amps
Non-Repetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I _{FSM}	50		Amps
Operating Junction Temperature	TJ	- 65 to +175		°C
THERMAL CHARACTERISTICS				
Thermal Resistance, Junction to Lead (T _L = 25°C)	$R_{ heta JL}$	13		°C/W
ELECTRICAL CHARACTERISTICS				
Maximum Instantaneous Forward Voltage (1) ($i_F = 2.0 \text{ A}, T_J = 25^{\circ}\text{C}$) ($i_F = 2.0 \text{ A}, T_J = 150^{\circ}\text{C}$)	VF	0.9 0.7		Volts
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, T _J = 25°C) (Rated dc Voltage, T _J = 150°C)	ated dc Voltage, $T_J = 25^{\circ}C$)		-	μА
Maximum Reverse Recovery Time ($i_F = 1.0 \text{ A}, \text{ di/dt} = 50 \text{ A/}\mu\text{s}$) ($i_F = 0.5 \text{ A}, i_R = 1.0 \text{ A}, I_R \text{ to } 0.25 \text{ A}$)	t _{rr}	30 20		ns
Maximum Forward Recovery Time (i _F = 1.0 A, di/dt = 100 A/μs, Rec. to 1.0 V)	t _{fr}	20	0	ns

⁽¹⁾ Pulse Test: Pulse Width = 300 μ s, Duty Cycle \leq 2.0%.



 $^{^{\}star}$ The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these same curves if applied V_{R} is sufficiently below rated $V_{R}.$

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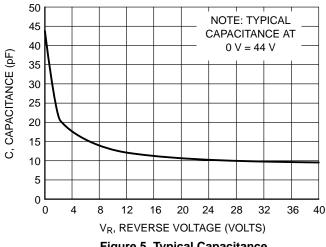


Figure 5. Typical Capacitance

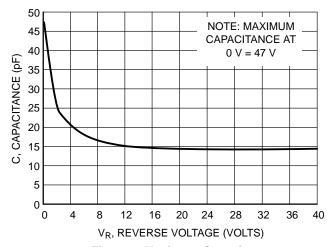


Figure 6. Maximum Capacitance

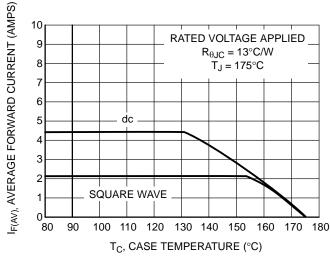


Figure 7. Current Derating, Case

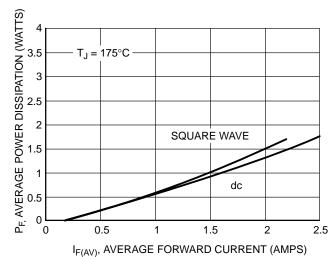


Figure 8. Power Dissipation



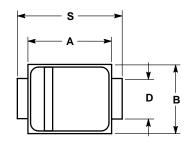


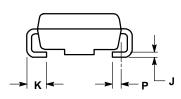


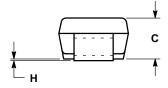
PACKAGE DIMENSIONS

SMB

CASE 403A-03 ISSUE D







NOTES:

- DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982
- CONTROLLING DIMENSION: INCH.
- D DIMENSION SHALL BE MEASURED WITHIN DIMENSION P.

	INC	HES	MILLIMETERS		
DIM	MIN	MAX	MIN	MAX	
Α	0.160	0.180	4.06	4.57	
В	0.130	0.150	3.30	3.81	
С	0.075	0.095	1.90	2.41	
D	0.077	0.083	1.96	2.11	
Н	0.0020	0.0060	0.051	0.152	
J	0.006	0.012	0.15	0.30	
K	0.030	0.050	0.76	1.27	
Р	0.020 REF		0.51 REF		
S	0.205	0.220	5.21	5.59	

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