

# Ultrafast Recovery Rectifiers

The Ultrafast Recovery Rectifiers, with reverse times of 25 to 100 nanoseconds, are expanding the SWITCHMODE rectifier family. They complement the broad array of Schottky devices for use in the higher voltage outputs and internal circuitry of switching power supplies as operating frequencies

increase from 20 kHz to 250 kHz and beyond. Additional package styles and operating current levels are planned.

All devices are connected cathode-to-case or cathode-to-heatsink, except where noted. Contact your Motorola representative for more information.








**Table 5 — Ultrafast Recovery Rectifiers**

	$I_O$ , AVERAGE RECTIFIED FORWARD CURRENT (Amperes) <sup>(1)</sup>							
	1		3		4	6		8
	59-04 Plastic Cathode = Polarity Band	403A-03 SMB Cathode = Notch	403-03 SMC Cathode = Notch	369A-11 DPAK Style 3	267-03 Plastic Cathode = Polarity Band	369A-11 DPAK Style 3	221A-06 (TO-220AB) Style 6	221B-02 (TO-220AC) Style 1
$V_{RRM}$ (Volts)								
50	MUR105			MURD305	MUR405	MURD605CT	MUR605CT	MUR805
100	MUR110			MURD310	MUR410	MURD610CT	MUR610CT	MUR810
150	MUR115			MURD315	MUR415	MURD615CT	MUR615CT	MUR815
200	<b>MUR120</b>	<b>MURS120T3</b>	<b>MURS320T3</b>	<b>MURD320</b>	<b>MUR420</b>	<b>MURD620CT</b>	<b>MUR620CT</b>	<b>MUR820</b>
300	MUR130				MUR430			MUR830
400	MUR140				MUR440			MUR840
500	MUR150				MUR450			MUR850
600	<b>MUR160</b>	<b>MURS160T3</b>	<b>MURS360T3</b>		<b>MUR460</b>			<b>MUR860</b>
700	MUR170E				MUR470E			MUR870E
800	MUR180E				MUR480E			MUR880E
900	MUR190E				MUR490E			MUR890E
1000	<b>MUR1100E</b>				<b>MUR4100E</b>			<b>MUR8100E</b>
$I_{FSM}$ (Amperes)	35	40	75	75	125	63	75	100
$t_{rr}$ nsec	25/50/75	25/50	25/50	35	25/50/75	35	35	35/60/100
$T_J$ (Max) °C	175	175	175	175	175	175	175	175

<sup>(1)</sup>  $I_O$  is total device output current.

Devices listed in bold, italic are Motorola preferred devices.

Table 5 — Ultrafast Recovery Rectifiers (continued)

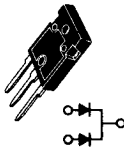



VRRM (Volts)	I <sub>O</sub> , AVERAGE RECTIFIED FORWARD CURRENT (Amperes) <sup>(1)</sup>							
	8	15	16		25	30		
	221A-06 (TO-220AB) 	221B-02 (TO-220AC) Style 1 	221A-06 (TO-220AB) Style 6 	Style 7 	56-03 (DO-203AA) Style 2 	340E-01 (TO-218) Style 1 	340D-01 (TO-218AC) Style 2 	
50		MUR1505	MUR1605CT	MUR1605CTR	MUR2505		R710XPT	MUR3005PT
100		MUR1510	MUR1610CT	MUR1610CTR	MUR2510		R711XPT	MUR3010PT
150		MUR1515	MUR1615CT	MUR1615CTR	MUR2515			MUR3015PT
200		<b>MUR1520</b>	<b>MUR1620CT</b>	<b>MUR1620CTR</b>	<b>MUR2520</b>	<b>MUR3020</b>	<b>R712XPT</b>	<b>MUR3020PT</b>
300		MUR1530	MUR1630CT			MUR3030		MUR3030PT
400	<b>MURH840CT</b>	MUR1540	MUR1640CT			<b>MUR3040</b>	R714XPT	MUR3040PT
500		MUR1550	MUR1650CT					MUR3050PT
600	<b>MURH860CT</b>	<b>MUR1560</b>	<b>MUR1660CT</b>					<b>MUR3060PT</b>
700								
800								
900								
1000								
I <sub>FSM</sub> (Amperes)	100	200	200	100	500	300	150	400
t <sub>rr</sub> nsec	28	35/60	35	35	50	100	100	35
T <sub>J</sub> (Max) °C	175	175	175	175	175	175	150	175

<sup>(1)</sup>I<sub>O</sub> is total device output current.

Devices listed in bold, italic are Motorola preferred devices.

# ULTRAFAST RECOVERY RECTIFIERS (continued)


Table 5 — Ultrafast Recovery Rectifiers (continued)

$V_{RRM}$ (Volts)	$I_O$ , AVERAGE RECTIFIED FORWARD CURRENT (Amperes) <sup>(1)</sup>			
	30	50	60	70
	340F-01 (TO-247) 	257-01 (DO-203AB) Style 2 	340E-01 (TO-218) Style 1 	257-01 (DO-203AB) Style 2 
50		MUR5005		MUR7005
100		MUR5010		MUR7010
150		MUR5015		MUR7015
200	MUR3020WT	<b>MUR5020</b>	<b>MUR6020</b>	<b>MUR7020</b>
300			MUR6030	
400	MUR3040WT		<b>MUR6040</b>	
500				
600	MUR3060WT			
700				
800				
900				
1000				
$I_{FSM}$ (Amperes)	350	600	600	1000
$t_{rr}$ nec	60	50	100	50
$T_J$ (Max) °C	175	175	175	175

<sup>(1)</sup> $I_O$  is total device output current.

Devices listed in bold, italic are Motorola preferred devices.

Table 5 — Ultrafast Recovery Rectifiers (continued)

V <sub>RRM</sub> (Volts)	I <sub>O</sub> , AVERAGE RECTIFIED FORWARD CURRENT (Amperes) <sup>(1)</sup>	
	100	200
	357C-03 POWERTAP Cathode = Mounting Plate Anode = Terminal 	
50		
100		
150		
200	<i>MUR10020CT</i>	<i>MUR20020CT</i>
300		
400		<i>MUR20040CT</i>
500		
600		
700		
800		
900		
1000		
I <sub>FSM</sub> (Amperes)	400	800
t <sub>rr</sub> nec	50	50
T <sub>J</sub> (Max) °C	175	175

<sup>(1)</sup>I<sub>O</sub> is total device output current.

Devices listed in bold, italic are Motorola preferred devices.