SG267/D
Rev 18

MOTOROLA

RECTIFIERS

PART NUMBER KEY **XXX X** **XX** **XX** **XX X**

PREFIX
(TYPE DESIGNATOR)
F = FULLY ISOLATED
S = SURFACE MT (SMB/SMC)
D = DPAK
B = D^2PAK
H = MEGAHERTZ

XX
I_O

XX
V_R
(X10 EXCEPT SCHOTTKY)

XX X
R = REVERSE
L = LOW V_F
E = ENERGY
SUFFIX
(DUAL DESIGNATOR)

PREFIX KEY

MUR = MOTOROLA ULTRA FAST RECTIFIER
MBR = MOTOROLA (SCHOTTKY) BARRIER RECTIFIER
MR = MOTOROLA STANDARD & FAST RECOVERY
MSR = MOTOROLA ULTRASOFT

SUFFIX KEY

CT = CENTER TAP (DUAL) TO-220, POWERTAP, DPAK, D^2PAK
PT = CENTER TAP (DUAL) TO-218 PACKAGE
WT = CENTER TAP (DUAL) TO-247
–1 = STRAIGHT LEAD D^2PAK

EXAMPLE:	MUR	30	20	WT
	MOTOROLA ULTRAFAST	30 AMP	200 V	CENTER TAP (DUAL) TO-247
EXAMPLE:	MBR	30	45	WT
	MOTOROLA SCHOTTKY	30 AMP	45 V	CENTER TAP (DUAL) TO-247

Rectifier Numbering System

Application Specific Rectifiers

Table 1. Low V_F Schottky Rectifiers

Device	I_O Amps	V_{RRM} (Volts)	V_F @ Rated I_O and T_C = 25°C Volts (Max)	I_R @ Rated V_{RRM} mAmps (Max)	Package
MBR0520LT1, T3	0.5	20	0.33	0.25	SOD-123
MBRS130LT3	1	30	0.395	1	SMB
MBRD835L	8	35	0.41	1.4	DPAK
MBRD1035CTL	10	35	0.41	6	DPAK
MBR2030CTL	20	30	0.48	5	TO-220
MBRB2535CTL	25	35	0.41	10	D^2PAK
MBR2535CTL	25	35	0.41	5	TO-220
MBRB2515L	25	15	0.42	15	D^2PAK
MBR2515L	25	15	0.42	15	TO-220
MBRB3030CTL	30	30	0.51	5	D^2PAK
MBR4015LWT	40	15	0.42	5	TO-247
MBR5025L	50	25	0.58	0.5	TO-218
MBRP20030CTL	200	30	0.52	5	POWERTAP II
MBRP20035L	200	35	0.57	10	POWERTAP III
MBRP20045L	200	45	0.57	10	POWERTAP III
MBRP200100L	200	100	0.83	6	POWERTAP III
MBRP30035L	300	35	0.57	10	POWERTAP III
MBRP40045CTL	400	45	0.57	10	POWERTAP II
MBRP400100CTL	400	100	0.83	6	POWERTAP II
MBRP60035CTL	600	35	0.57	10	POWERTAP II

Table 2. MEGAHERTZ™ Rectifiers

Device	I_O Amps	V_{RRM} (Volts)	Maximum		t_{rr} (Nanosecond)
			V_F @ Rated I_O and Temp. (Volts)	I_R @ Rated V_{RRM} (mAmps)	
MURH840CT/MURHB840CT	8	400	1.7	0.01	28
MURH860CT	8	600	2.0	0.01	35
MURHB860CT	8	600	2.0	0.01	35
MURHF860CT	8	600	2.0	0.01	35
MURH8100E	8	1000	2.6	0.01	50

Table 3. UltraSoft Rectifiers (For High Speed Rectification)

Device	I_O Amps	V_{RRM} (Volts)	Max V_F @ I_F (Volts)	Max t_{rr} (ηSec)	T_JMax (°C)
MSRP10040	100	400	1.75 @ 100 A	75	150
MSRD620CT	6	200	1.2 @ 6.0 A	55	150

SCHOTTKY Rectifiers

Table 4. Surface Mount Schottky Rectifiers

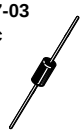
V_{RRM} (Volts)	I_O[1] (Amperes)	I_O Rating Condition	Device	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R[2] T_J = 25°C (mA)	Max I_R[3] (mA)	Package
20	0.5	T_L = 105°C	***MBR0520LT1***[5] ★ ***MBR0520LT3***	0.310 @ 0.1 A 0.385 @ 0.5 A	5	125	.075 @ 10 V .250 @ 20 V	5 @ 10 V 8 @ 20 V	**CASE 425-04** (SOD-123) Cathode = Band
30	0.5	T_L = 105°C	***MBR0530T1***[5] ★ ***MBR0530T3***	0.375 @ 0.1 A 0.430 @ 0.5 A	5	125	.020 @ 15 V .130 @ 30 V	—	
40	0.5	T_L = 110°C	***MBR0540T1***[5] ★ ***MBR0540T3***	0.53 @ 0.5 A	20	150	.010 @ 20 V .020 @ 40 V	—	
20	1	T_{tab} ≤ 100°C	***MBRM120T3***	0.36 @ 0.1 A 0.45 @ 1 A	50	150	0.4 @ 20 V	N/A	**CASE 457–04** (POWERMITE®)
40	1	T_{tab} ≤ 100°C	***MBRM140T3***	0.39 @ 0.1 A 0.55 @ 1 A	50	150	0.4 @ 40 V	N/A	
30	1	T_C ≤ 105°C	***MBRA130LT3***	0.41 @ 1 A 0.47 @ 2 A	25	125	1.0 @ 30 V 0.4 @ 15 V	25 @ 30 V	**CASE 403B–01** (SMA)
40	1	T_C ≤ 100°C	***MBRA140T3***	0.60 @ 1 A 0.73 @ 2 A	25	125	1.0 @ 40 V 0.2 @ 20 V	25 @ 40 V	
30	1	T_L = 120°C	***MBRS130LT3***[6]	0.395 @ 1.0 A	40	125	1	10	**CASE 403-03** (SMB) Cathode = Notch
40	1	T_L = 115°C	***MBRS140T3***[6]	0.6 @ 1.0 A	40	125	1	10	
100	1	T_L = 120°C	***MBRS1100T3***[6]	0.75 @ 1.0 A	40	150	0.5	5	
40	3	T_L = 100°C	***MBRS340T3***[6]	0.525 @ 3.0 A	80	125	2	20	**CASE 403A-03** (SMC) Cathode = Notch
40	2	T_C ≤ 95°C	***MBRS240LT3***	0.43 @ 2 A 0.53 @ 4 A	25	125	2.0 @ 40 V 0.5 @ 20 V	60 @ 40 V 40 @ 20 V	
60	3	T_L = 100°C	***MBRS360T3***[6] ★	0.74 @ 3.0 A	80	125	0.5	20	
60	3	T_C = 125°C	***MBRD360***	0.60 @ 3.0 A	75	150	0.2	20 @ 125°C	**CASE 369A-13** (DPAK)
40	6	T_C = 130°C	***MBRD640CT***	0.70 @ 3.0 A	75	150	0.1	15 @ 125°C	
60	6	T_C = 130°C	***MBRD660CT***	0.70 @ 3.0 A	75	150	0.1	15 @ 125°C	
35	8	T_C = 100°C	***MBRD835L*** ★	0.40 @ 3.0 A 0.51 @ 8.0 A	100	125	1.4	35	
35	10	T_C = 90°C	***MBRD1035CTL*** ★	0.49 @ 10 A	100	125	2	130 @ 125°C	
45	15	T_C = 105°C	***MBRB1545CT***	0.84 @ 15 A	150	150	0.1	15 @ 125°C	**CASE 418B-03** (D^2PAK) "CT" Suffix Non-"CT" Suffix
60	20	T_C = 110°C	***MBRB2060CT***	0.95 @ 20 A	150	150	0.15	150 @ 125°C	
100	20	T_C = 110°C	***MBRB20100CT***	0.85 @ 10 A 0.95 @ 20 A	150	150	0.1	6 @ 125°C	
200	20	T_C = 125°C	***MBRB20200CT*** ★	1.0 @ 20 A	150	150	1	50 @ 125°C	
15	25	T_C = 90°C	***MBRB2515L*** ★	0.45 @ 25 A	150	100	15	200 @ 70°C	
35	25	T_C = 110°C	***MBRB2535CTL***	0.47 @ 12.5 A 0.55 @ 25 A	150	125	10	500 @ 125°C	
45	25	T_C = 130°C	***MBRB2545CT***	0.82 @ 30 A	150	150	0.2	40 @ 125°C	
30	30	T_C = 115°C	***MBRB3030CT*** ★	0.54 @ 15 A 0.67 @ 30 A	300	150	1.2	145 @ 150°C 46 @ 10 V, 150°C	
30	30	T_C = 95°C	***MBRB3030CTL*** ★	0.45 @ 15 A 0.51 @ 30 A	150	125	2	195 @ 125°C 75 @ 10 V, 125°C	
30	40	T_C = 110°C	***MBRB4030*** ★	0.46 @ 20 A 0.55 @ 40 A	300	150	1	150 @ 125°C	
30	70	T_C ≤ 135°C	***MBRV7030CTL***	0.50 @ 35 A 0.62 @ 70 A	500	150	2.0 @ 30 V	40 @ 30 V	**CASE 433–01** (D^3PAK)

[1] I_O is total device current capability.
[2] V_{RRM} unless noted
[3] V_{RRM}, T_J = 100°C unless noted
[5] T1 suffix = 3000/reel, T3 suffix = 10000/reel.
[6] T3 suffix = 2500/reel.

★ New Product

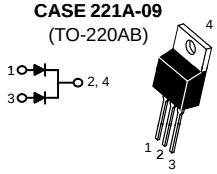
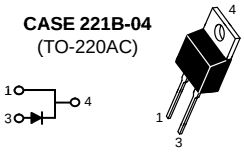
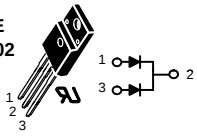
All devices listed are Motorola preferred devices

Table 5. Axial Lead Schottky Rectifiers

V_{RRM} (Volts)	I_O (Amperes)	I_O Rating Condition	Device	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R(2) T_L = 25°C (mA)	Max I_R(3) T_L (mA)	Package
20	1	T_A = 55°C $R_{\theta JA}$ = 80°C/W	***1N5817***	0.45 @ 1.0 A	25	125	1	10	**CASE 59–04 Plastic**  Cathode = Polarity Band
30	1	T_A = 55°C $R_{\theta JA}$ = 80°C/W	***1N5818***	0.55 @ 1.0 A	25	125	1	10	
40	1	T_A = 55°C $R_{\theta JA}$ = 80°C/W	***1N5819***	0.60 @ 1.0 A	25	125	1	10	
60	1	T_A = 55°C $R_{\theta JA}$ = 80°C/W	***MBR160***	0.75 @ 1.0 A	25	150	0.5	5	
100	1	T_A = 120°C $R_{\theta JA}$ = 50°C/W	***MBR1100***	0.79 @ 1.0 A	50	150	0.5	5	
20	3	T_A = 76°C $R_{\theta JA}$ = 28°C/W	***1N5820***	0.457 @ 3.0 A	80	125	2	20	**CASE 267-03 Plastic**  Cathode = Polarity Band
30	3	T_A = 71°C $R_{\theta JA}$ = 28°C/W	***1N5821***	0.500 @ 3.0 A	80	125	2	20	
40	3	T_A = 61°C $R_{\theta JA}$ = 28°C/W	***1N5822***	0.525 @ 3.0 A	80	125	2	20	
40	3	T_A = 65°C $R_{\theta JA}$ = 28°C/W	***MBR340***	0.600 @ 3.0 A	80	150	0.6	20	
60	3	T_A = 65°C $R_{\theta JA}$ = 28°C/W	***MBR360***	0.740 @ 3.0 A	80	150	0.6	20	
100	3	T_A = 100°C $R_{\theta JA}$ = 28°C/W	***MBR3100***	0.79 @ 3.0 A	150	150	0.6	20	

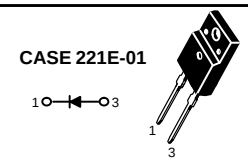
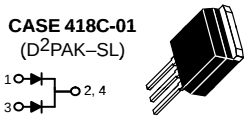
(2)V_{RRM} unless noted
(3)V_{RRM}, T_J = 100°C unless noted

Table 6. TO-220 and D^{2}PAK Straight Lead Type Schottky Rectifiers

V_{RRM} (Volts)	I_O (Amperes)	I_O Rating Condition	Device	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R(2) T_C = 25°C (mA)	Max I_R(3) (mA)	Package
45	15	T_C = 105°C	***MBR1545CT***	0.84 @ 15 A	150	150	0.1	15 @ 125°C	**CASE 221A-09** (TO-220AB) 
30	20	T_C = 137°C	***MBR2030CTL*** ★	0.52 @ 10 A 0.58 @ 20 A	150	150	5	40	
45	20	T_C = 135°C	***MBR2045CT***	0.84 @ 20 A	150	150	0.1	15 @ 125°C	
60	20	T_C = 133°C	***MBR2060CT***	0.85 @ 10 A 0.95 @ 20 A	150	150	0.1	6 @ 125°C	
100	20	T_C = 133°C	***MBR20100CT***	0.85 @ 10 A 0.95 @ 20 A	150	150	0.1	6 @ 125°C	
200	20	T_C = 125°C	***MBR20200CT***	1.0 @ 20 A	150	150	1	50 @ 125°C	
15	25	T_C = 90°C	***MBR2515L*** ★	0.45 @ 25 A	150	100	15	200 @ 70°C	
35	25	T_C = 95°C	***MBR2535CTL*** ★	0.55 @ 25 A	150	125	5	500 @ 125°C	
45	25	T_C = 130°C	***MBR2545CT***	0.82 @ 30 A	150	150	0.2	40 @ 125°C	
45	30	T_C = 130°C	***MBR3045ST*** ★	0.76 @ 30 A	150	150	0.2	40 @ 125°C	
45	7.5	T_C = 105°C	***MBR745***	0.84 @ 15 A	150	150	0.1	15 @ 125°C	**CASE 221B-04** (TO-220AC) 
45	10	T_C = 135°C	***MBR1045***	0.84 @ 20 A	150	150	0.1	15 @ 125°C	
60	10	T_C = 133°C	***MBR1060***	0.80 @ 10 A	150	150	0.1	6 @ 125°C	
100	10	T_C = 133°C	***MBR10100***	0.80 @ 10 A	150	150	0.1	6 @ 125°C	
45	16	T_C = 125°C	***MBR1645***	0.63 @ 16 A	150	150	0.2	40 @ 125°C	
45	15	T_C = 105°C	***MBRF1545CT*** ★	0.84 @ 15 A	150	150	0.1	15 @ 125°C	**CASE 221D-02** 
45	20	T_C = 135°C	***MBRF2045CT*** ★	0.84 @ 20 A	150	150	0.1	15 @ 125°C	
60	20	T_C = 133°C	***MBRF2060CT*** ★	0.95 @ 20 A	150	150	0.15	15 @ 125°C	
100	20	T_C = 133°C	***MBRF20100CT*** ★	0.95 @ 20 A	150	150	0.15	15 @ 125°C	
200	20	T_C = 125°C	***MBRF20200CT*** ★	1.0 @ 20 A	150	150	1	50 @ 125°C	
45	25	T_C = 125°C	***MBRF2545CT*** ★	0.82 @ 25 A	150	150	0.2	40 @ 125°C	

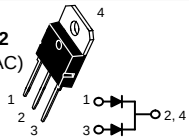
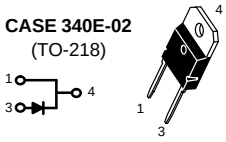
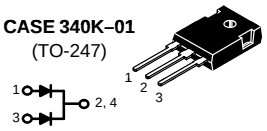
(2)V_{RRM} unless noted
(3)V_{RRM}, T_J = 100°C unless noted
Ⓤ Indicates UL Recognized — File #E69369

Table 6. TO-220 and D²PAK Straight Lead Type Schottky Rectifiers (continued)

V_{RRM} (Volts)	I_O (Amperes)	I_O Rating Condition	Device	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R[2] T_C = 25°C (mA)	Max I_R[3] (mA)	Package
45	7.5	T_C = 105°C	***MBRF745*** ★	0.84 @ 15 A	150	150	0.1	15 @ 125°C	**CASE 221E-01** 
45	10	T_C = 135°C	***MBRF1045*** ★	0.84 @ 20 A	150	150	0.1	15 @ 125°C	
30	30	T_C = 115°C	***MBRB3030CT1*** ★	0.54 @ 15 A	300	150	1.2	145 @ 150°C	**CASE 418C-01** (D²PAK–SL) 
35	25	T_C = 110°C	***MBRB2535CTL1*** ★	0.47 @ 12.5 A	150	125	10	500 @ 125°C	
100	20	T_C = 110°C	***MBRB20100CT1*** ★	0.85 @ 10 A	150	150	0.1	6 @ 125°C	
100	30	T_C = 110°C	***MBRB30100CT–001*** ★	0.88 @ 15 A	150	150	0.1	6 @ 125°C	

[2]V_{RRM} unless noted
[3]V_{RRM}, T_J = 100°C unless noted
Indicates UL Recognized — File #E69369

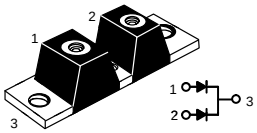
Table 7. TO-218 and TO-247 Type Schottky Rectifiers

V_{RRM} (Volts)	I_O (Amperes)	I_O Rating Condition	Device	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R[2] T_C = 25°C (mA)	Max I_R[3] (mA)	Package
45	30	T_C = 105°C	***MBR3045PT***	0.76 @ 30 A	200	150	1	100 @ 125°C	**CASE 340D-02** (TO-218AC) 
45	40	T_C = 125°C	***MBR4045PT***	0.70 @ 20 A 0.80 @ 40 A	400	150	1	50	
45	60	T_C = 125°C	***MBR6045PT***	0.62 @ 30 A 0.75 @ 60 A	500	150	1	50	
25	50	T_C = 125°C	***MBR5025L***	0.54 @ 30 A 0.62 @ 50 A	300	150	0.5	60	**CASE 340E-02** (TO-218) 
45	30	T_C = 105°C	***MBR3045WT***	0.76 @ 30 A	200	150	1	100 @ 125°C	**CASE 340K–01** (TO-247) 
15	40	T_C = 125°C	***MBR4015LWT***	0.42 @ 20 A 0.50 @ 40 A	400	150	5	150 @ 75°C	
45	40	T_C = 125°C	***MBR4045WT***	0.70 @ 20 A 0.80 @ 40 A	400	150	1	50	
45	60	T_C = 125°C	***MBR6045WT***	0.62 @ 30 A 0.75 @ 60 A	500	150	1	50	
30	70	T_C = 135°C	***MBR7030WT***	0.55 @ 35 A 0.70	400	150	5	250	

[2]V_{RRM} unless noted
[3]V_{RRM}, T_J = 100°C unless noted

Table 8. POWERTAP II Schottky Rectifiers

V_{RRM} (Volts)	I_O[1] (Amperes)	I_O Rating Condition	Device	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R[2] T_C = 25°C (mA)	Max I_R[3] (mA)	Package
30	200	T_C = 125°C	***MBRP20030CTL***	0.52 @ 100 A 0.60 @ 200 A	1500	150	5	—	**CASE 357C-03** POWERTAP™
35	600	T_C = 100°C	***MBRP60035CTL***	0.57 @ 300 A	4000	150	10	250	
45	200	T_C = 125°C	***MBRP20045CT***	0.78 @ 100 A	1500	175	0.5	50 @ 125°C	
45	300	T_C = 120°C	***MBRP30045CT***	0.70 @ 150 A 0.82 @ 300 A	2500	175	0.8	75 @ 125°C	
45	400	T_C = 100°C	***MBRP40045CTL*** ★	0.57 @ 200 A	2500	150	10	—	
60	200	T_C = 125°C	***MBRP20060CT***	0.800 @ 100 A	1500	175	0.5	50 @ 125°C	
60	300	T_C = 120°C	***MBRP30060CT***	0.79 @ 150 A 0.89 @ 300 A	2500	175	0.8	75 @ 125°C	
100	400	T_C = 100°C	***MBRP400100CTL*** ★	0.83 @ 200 A	2500	150	6	—	



Cathode = Mounting Plate
Anode = Terminal

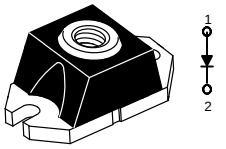
[1]I_O is total device current capability.
[2]V_{RRM} unless noted
[3]V_{RRM}, T_J = 100°C unless noted

★ New Product

All SOT-227B devices have 2500 volts isolation between the heatsink and active elements.

Table 9. POWERTAP III Schottky Rectifiers

V_{RRM} (Volts)	I_O[1] (Amperes)	I_O Rating Condition	Device	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R[2] T_C = 25°C (μA)	Max I_R[3] (μA) T_J = 100°C	Package
35	200	T_C = 100°C	***MBRP20035L*** ★	0.57 @ 200 A	2000	150	10	250	**CASE 357D-01** POWERTAP™
	300	T_C = 100°C	***MBRP30035L*** ★	0.57 @ 300 A	3000	150	10	250	
45	200	T_C = 100°C	***MBRP20045L*** ★	0.57 @ 200 A	2000	150	10	—	
100	200	T_C = 100°C	***MBRP200100L*** ★	0.83 @ 200 A	2000	150	6	—	



[1]I_O is total device current capability.
[2]V_{RRM} unless noted
[3]V_{RRM}, T_J = 100°C unless noted

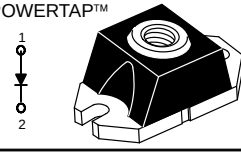
★ New Product

All SOT-227B devices have 2500 volts isolation between the heatsink and active elements.

NEW UltraSoft Rectifiers

Table 10. UltraSoft Rectifiers (For High Speed Rectification)

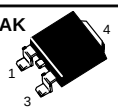
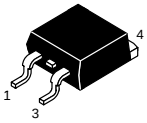
V_{RRM} (Volts)	I_O[1] (Amperes)	I_O Rating Condition	Device	Max V_F @ i_F T_C = 29°C (Volts)	t_{rr} (ηSec)	T_J Max (°C)	Max I_R[2] T_C = 25°C (mA)	Max I_R[3] (mA) T_J = 100°C	Package
400	100	T_C = 100°C	***MSRP10040*** ★	1.75 @ 100 A	75	150	50	500	**CASE 357D-01** POWERTAP™
200	6	T_C = 145°C	***MSRD620CT*** ★	1.2 @ 6.0 A	55	150	0.001	500	**CASE 369A–13** (DPAK)



[1]I_O is total device current capability.
[2]V_{RRM} unless noted
[3]V_{RRM}, T_J = 100°C unless noted

Ultrafast Rectifiers

Table 11. Surface Mount Ultrafast Rectifiers

V_{RRM} (Volts)	I_O[1] (Amperes)	I_O Rating Condition	Device	Max t_{rr} (ns)	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R[2] T_J = 25°C (μA)	Max I_R[4] (μA) Package	Package
200	1	T_L = 155°C	***MURS120T3***[6]	35	0.875 @ 1.0 A	40	175	2	50	**SMB** Cathode = Notch 
600	1	T_L = 150°C	***MURS160T3***[6]	75	1.25 @ 1.0 A	35	175	5	150	
200	3	T_L = 140°C	***MURS320T3***[6]	35	0.875 @ 3.0 A	75	175	5	15	**SMC** Cathode = Notch 
600	3	T_L = 130°C	***MURS360T3***[6]	75	1.25 @ 3.0 A	75	175	10	250	
200	3	T_L = 158°C	***MURD320***	35	0.95 @ 3.0 A	75	175	5	500 @ 125°C	**DPAK**   "CT" Suffix
200	6	T_L = 145°C	***MURD620CT***	35	1.0 @ 3.0 A	63	175	5	250 @ 125°C	
400	8	T_L = 120°C	***MURHB840CT***	28	2.2 @ 4.0 A	100	175	10	500	**D^2PAK**   Non-"CT" Suffix
600	8	T_L = 120°C	***MURHB860CT*** ★	35	2.8 @ 4.0 A	100	175	10	500	
200	16	T_L = 150°C	***MURB1620CT***	35	0.975 @ 8.0 A	100	175	5	250	
600	16	T_L = 150°C	***MURB1660CT***	60	1.5 @ 8.0 A	100	175	10	500	

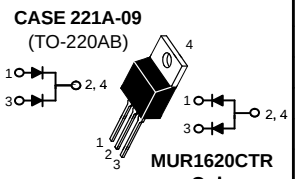
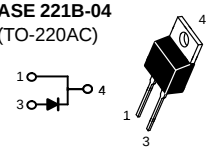
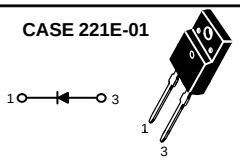
[1] I_O is total device current capability.
[2] V_{RRM} unless noted
[4] V_{RRM}, T_J = 150°C unless noted
[6] T3 suffix = 2500/reel.
★ New Product

Table 12. Axial Lead Ultrafast Rectifiers

V_{RRM} (Volts)	I_O (Amperes)	I_O Rating Condition	Device	Max t_{rr} (ns)	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R[2] T_J = 25°C (μA)	Max I_R[4] (μA)	Package
200	1	T_A = 130°C $R_{\theta JA}$ = 50°C/W	***MUR120***	25	0.875 @ 1.0 A	35	175	2	50	**CASE 59-04** Plastic  Cathode = Polarity Band
400	1	T_A = 120°C $R_{\theta JA}$ = 50°C/W	***MUR140***	50	1.25 @ 1.0 A	35	175	5	150	
600	1	T_A = 120°C $R_{\theta JA}$ = 50°C/W	***MUR160***	50	1.25 @ 1.0 A	35	175	5	150	
1000	1	T_A = 95°C $R_{\theta JA}$ = 50°C/W	***MUR1100E***	75	1.75 @ 1.0 A	35	175	10	600 @ 100°C	
200	4	T_A = 80°C $R_{\theta JA}$ = 28°C/W	***MUR420***	25	0.875 @ 3.0 A	125	175	5	150	**CASE 267-03** Plastic  Cathode = Polarity Band
400	4	T_A = 40°C $R_{\theta JA}$ = 28°C/W	***MUR440***	50	1.25 @ 3.0 A	70	175	10	250	
600	4	T_A = 40°C $R_{\theta JA}$ = 28°C/W	***MUR460***	50	1.25 @ 3.0 A	70	175	10	250	
1000	4	T_A = 35°C $R_{\theta JA}$ = 28°C/W	***MUR4100E***	75	1.75 @ 3.0 A	70	175	25	900 @ 100°C	

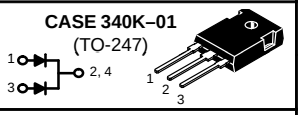
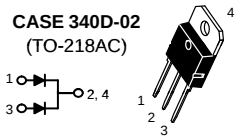
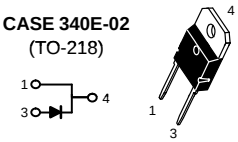
[2] V_{RRM} unless noted
[4] V_{RRM}, T_J = 150°C unless noted

Table 13. TO-220 Type Ultrafast and MEGAHERTZ™ Rectifiers

V_{RRM} (Volts)	I_O (Amperes)	I_O Rating Condition	Device	Max t_{rr} (ns)	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R(2) T_C = 25°C (μA)	Max I_R(4) (μA)	Package
200	6	T_C = 130°C	***MUR620CT***	35	0.975 @ 3.0 A	75	175	5	250	**CASE 221A-09** (TO-220AB)  **MUR1620CTR Only**
400	8	T_C = 120°C	***MURH840CT***	28	2.0 @ 4.0 A	100	175	10	500	
600	8	T_C = 120°C	***MURH860CT***	35	2.8 @ 4.0 A	100	175	10	500	
200	16	T_C = 150°C	***MUR1620CT***	35	0.975 @ 8.0 A	100	175	5	250	
200	16	T_C = 160°C	***MUR1620CTR***	85	1.2 @ 8.0 A	100	175	5	500	
400	16	T_C = 150°C	***MUR1640CT***	60	1.30 @ 8.0 A	100	175	10	250	
600	16	T_C = 150°C	***MUR1660CT***	60	1.5 @ 8.0 A	100	175	10	500	
200	8	T_C = 150°C	***MUR820***	35	0.975 @ 8.0 A	100	175	5	250	**CASE 221B-04** (TO-220AC) 
400	8	T_C = 150°C	***MUR840***	50	1.30 @ 8.0 A	100	175	10	500	
600	8	T_C = 150°C	***MUR860***	50	1.50 @ 8.0 A	100	175	10	500	
800	8	T_C = 175°C	***MUR880E***	75	1.80 @ 8.0 A	100	175	25	500 @ 100°C	
1000	8	T_C = 150°C	***MUR8100E***	75	1.80 @ 8.0 A	100	175	25	500 @ 100°C	
1000	8	T_C = 150°C	***MURH8100E***	50	2.60 @ 8.0 A	100	175	10	100	
1200	10	T_C = 125°C	***MUR10120E***	175	2.2 @ 6.5 A	100	125	100	1000 @ 125°C	
1500	10	T_C = 125°C	***MUR10150E***	175	2.4 @ 6.5 A	100	125	100	1000 @ 125°C	
200	15	T_C = 150°C	***MUR1520***	35	1.05 @ 15 A	200	175	10	500	
400	15	T_C = 150°C	***MUR1540***	60	1.25 @ 15 A	150	175	10	500	
600	15	T_C = 145°C	***MUR1560***	60	1.50 @ 15 A	150	175	10	1000	
200	8	T_C = 150°C	***MURF82***	25	0.975 @ 8.0 A	100	150	5	250	**CASE 221E-01** 
200	16	T_C = 150°C	***MURF1620CT***	25	0.975 @ 8.0 A	100	150	5	250	
600	8	$T_C \leq$ 120°C	***MURHF860CT*** ★	35	2.8 @ 4.0 A	100	175	10	500	
600	16	T_C = 150°C	***MURF1660CT***	50	1.50 @ 8.0 A	100	150	10	500	

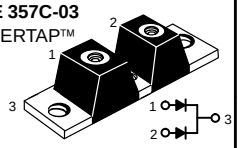
(2)V_{RRM} unless noted
(4)V_{RRM}, T_J = 150°C unless noted
Indicates UL Recognized — File #E69369
★ New Product

Table 14. TO-218 and TO-247 Type Ultrafast Rectifiers

V_{RRM} (Volts)	I_O (Amperes)	I_O Rating Condition	Device	Max t_{rr} (ns)	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R(2) T_J = 25°C (μA)	Max I_R(4) (mA)	Package
200	30	T_C = 145°C	***MUR3020WT***	35	1.05 @ 15 A	150	175	10	0.5	**CASE 340K–01** (TO-247) 
600	30	T_C = 145°C	***MUR3060WT***	60	1.70 @ 15 A	150	175	10	1	
200	30	T_C = 150°C	***MUR3020PT***	35	1.12 @ 15 A	200	175	10	0.5	**CASE 340D-02** (TO-218AC) 
400	30	T_C = 150°C	***MUR3040PT***	60	1.12 @ 15 A	150	175	10	0.5	
600	30	T_C = 145°C	***MUR3060PT***	60	1.20 @ 15 A	150	175	10	1	
400	30	T_C = 70°C	***MUR3040***	100	1.5 @ 30 A	300	175	35	6 @ 100°C	**CASE 340E-02** (TO-218) 
800	30	T_C = 70°C	***MUR3080***	110	1.90 @ 30 A	300	175	100	5 @ 100°C	
400	60	T_C = 70°C	***MUR6040***	100	1.50 @ 60 A	600	175	60	10 @ 100°C	

(2)V_{RRM} unless noted
(4)V_{RRM}, T_J = 150°C unless noted

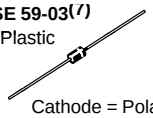
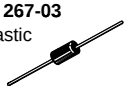
Table 15. POWERTAP II Ultrafast Rectifiers

V_{RRM} (Volts)	I_O(1) (Amperes)	I_O Rating Condition	Device	Max t_{rr} (ns)	Max V_F @ i_F T_C = 25°C (Volts)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R(2) T_J = 25°C (μA)	Max I_R(4) (mA)	Package
200	200	T_C = 130°C	***MURP20020CT***	50	1.00 @ 100 A	800	175	150	1 @ 125°C	**CASE 357C-03** POWERTAP™  Cathode = Mounting Plate Anode = Terminal
400	200	T_C = 100°C	***MURP20040CT***	50	1.30 @ 100 A	800	175	50	0.5 @ 125°C	

(1)I_O is total device current capability.
(2)V_{RRM} unless noted
(4)V_{RRM}, T_J = 150°C unless noted
★ New Product

Fast Recovery Rectifiers/General-Purpose Rectifiers

Table 16. Fast Recovery Rectifiers/General Purpose Rectifiers

V_{RRM} (Volts)	I_O (Amperes)	I_O Rating Condition	Device	Max V_F @ i_F T_J = 25°C (Volts)	Max t_{rr} (ns)	I_{FSM} (Amperes)	T_J Max (°C)	Max I_R[2] T_J = 25°C (μA)	Max I_R[3] (μA)	Package
200	1	T_C = 100°C	***MRA4003T3*** ⋆	1.1 @ 1.0 A	—	30	150	10	50	**CASE 403B-01** **SMA** Cathode = Notch 
400	1	T_C = 100°C	***MRA4004T3*** ⋆	1.1 @ 1.0 A	—	30	150	10	50	
600	1	T_C = 100°C	***MRA4005T3*** ⋆	1.1 @ 1.0 A	—	30	150	10	50	
800	1	T_C = 100°C	***MRA4006T3*** ⋆	1.1 @ 1.0 A	—	30	150	10	50	
1000	1	T_C = 100°C	***MRA4007T3*** ⋆	1.1 @ 1.0 A	—	30	150	10	50	
400	1	T_A = 75°C	***1N4004***	1.1 @ 1.0 A	—	30	150	10	50	**CASE 59-03**[7] Plastic  Cathode = Polarity Band
1000	1	T_A = 75°C	***1N4007***	1.1 @ 1.0 A	—	30	150	10	50	
200	1	T_A = 75°C	***1N4935***	1.2 @ 3.14 A T_J = 125°C	200	30	150	5	100	
600	1	T_A = 75°C	***1N4937***	1.2 @ 3.14 A T_J = 125°C	200	30	150	5	100	
400	3	T_L = 105°C	***1N5404***	1.2 @ 9.4 A	—	200	150	—	500 @ 80°C	**CASE 267-03** Plastic  Cathode = Polarity Band
600	3	T_L = 105°C	***1N5406***	1.2 @ 9.4 A	—	200	150	—	500 @ 80°C	
200	3	T_A = 80°C[8]	***MR852***	1.25 @ 3.0 A	200	100	150	10	200 @ 80°C	
600	3	T_A = 80°C[8]	***MR856***	1.25 @ 3.0 A	200	100	150	10	300 @ 80°C	
400	6	T_A = 60°C $R_{\theta JA}$ = 25°C/W	***MR754***	1.25 @ 100 A	—	400	175	25	1000	**CASE 194-04** Plastic  Cathode indicated by diode symbol
1000	6	T_A = 60°C $R_{\theta JA}$ = 25°C/W	***MR760***	1.25 @ 100 A	—	400	175	25	1000	
400	25	T_C = 150°C	***MR2504***	1.18 @ 78.5 A	—	400	175	100	500	**CASE 193-04** Plastic  Cathode = Polarity Band
1000	25	T_C = 150°C	***MR2510***	1.18 @ 78.5 A	—	400	175	100	500	
20	35	T_C = 150°C	***MR2535L***[9]	1.1 @ 100 A	—	400	175	0.2 @ 20 V	—	**CASE 194-04** Plastic  Cathode indicated by diode symbol

[2] V_{RRM} unless noted
[3] V_{RRM}, T_J = 100°C unless noted
[7] Package Size: 0.120" max diameter by 0.260" length.
[8] Must be derated for reverse power dissipation. See data sheet.
[9] Overvoltage Transient Suppressor: 24–32 volts avalanche voltage.
⋆ New Product

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