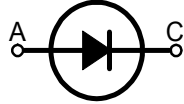
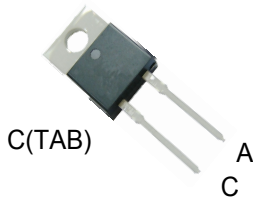
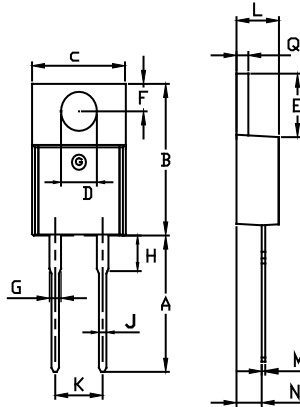


MUR1020-MUR1060

Ultra Fast Recovery Diodes



Dimensions TO-220AC



Dim.	Inches		Millimeter	
	Min.	Max.	Min.	Max.
A	0.500	0.580	12.70	14.73
B	0.560	0.650	14.23	16.51
C	0.380	0.420	9.66	10.66
D	0.139	0.161	3.54	4.08
E	2.300	0.420	5.85	6.85
F	0.100	0.135	2.54	3.42
G	0.045	0.070	1.15	1.77
H	-	0.250	-	6.35
J	0.025	0.035	0.64	0.89
K	0.190	0.210	4.83	5.33
L	0.140	0.190	3.56	4.82
M	0.015	0.022	0.38	0.56
N	0.080	0.115	2.04	2.49
Q	0.025	0.055	0.64	1.39

A=Anode, C=Cathode, TAB=Cathode

	V_{RSM} V	V_{RRM} V
MUR1020	200	200
MUR1040	400	400
MUR1050	500	500
MUR1060	600	600

Symbol	Test Conditions	Maximum Ratings				Unit
		MUR1020	MUR1040	MUR1050	MUR1060	
IFRMS IFAVM IFRM	$T_{VJ}=T_{VJM}$ $T_C=115^{\circ}\text{C}$; rectangular, $d=0.5$ $t_p<10\mu\text{s}$; rep. rating, pulse width limited by T_{VJM}	21 10 160	21 10 160	21 10 160	21 10 160	A
IFSM	$T_{VJ}=45^{\circ}\text{C}$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	160 170	150 160	140 150	130 140	A
	$T_{VJ}=150^{\circ}\text{C}$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	130 150	110 130	110 130	100 130	
I²t	$T_{VJ}=45^{\circ}\text{C}$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	60 75	60 75	60 75	60 75	A ² s
	$T_{VJ}=150^{\circ}\text{C}$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	42 47	42 47	42 47	42 47	
T_{VJ} T_{VJM} T_{stg}		-40...+150 150 -40...+150				°C
P_{tot}	$T_C=25^{\circ}\text{C}$	60				W
M_d	Mounting torque	0.4...0.6				Nm
Weight		2				g

MUR1020-MUR1060

Ultra Fast Recovery Diodes

Symbol	Test Conditions	Characteristic Values				
		MUR1020	MUR1040	MUR1050	MUR1060	Unit
I_R	$T_{VJ}=25^{\circ}\text{C}; V_R=V_{RRM}$	10	10	10	10	μA
	$T_{VJ}=25^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$	5	5	5	5	μA
	$T_{VJ}=125^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$	1.0	1.0	1.0	1.0	mA
V_F	$I_F=10\text{A}; T_{VJ}=150^{\circ}\text{C}$	1.0	1.1	1.1	1.3	V
	$T_{VJ}=25^{\circ}\text{C}$	1.1	1.4	1.6	1.6	V
V_{TO}	For power-loss calculations only	0.88	0.10	1.20	1.35	V
r_T	$T_{VJ}=T_{VJM}$	26.6	28.5	28.7	29.9	m Ω
R_{thJC} R_{thCK} R_{thJA}		2.0	2.0	2.0	2.0	K/W
		0.5	0.5	0.5	0.5	
		2.5	2.5	2.5	2.5	
t_{rr}	$I_F=1\text{A}; -di/dt=50\text{A}/\mu\text{s}; V_R=30\text{V}; T_{VJ}=25^{\circ}\text{C}$	35	35	35	50	ns
I_{RM}	$V_R=350\text{V}; I_F=8\text{A}; -di_F/dt=64\text{A}/\mu\text{s}; L \leq 0.05\mu\text{H}; T_{VJ}=100^{\circ}\text{C}$	3.0	2.7	2.6	2.5	A

FEATURES

- * International standard package JEDEC TO-220AC
- * Planar passivated chips
- * Very short recovery time
- * Extremely low switching losses
- * Low I_{RM}-values
- * Soft recovery behaviour

APPLICATIONS

- * Antiparallel diode for high frequency switching devices
- * Antisaturation diode
- * Snubber diode
- * Free wheeling diode in converters and motor control circuits
- * Rectifiers in switch mode power supplies (SMPS)
- * Inductive heating and melting
- * Uninterruptible power supplies (UPS)
- * Ultrasonic cleaners and welders

ADVANTAGES

- * High reliability circuit operation
- * Low voltage peaks for reduced protection circuits
- * Low noise switching
- * Low losses
- * Operating at lower temperature or space saving by reduced cooling