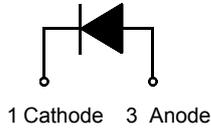


MUR2960F

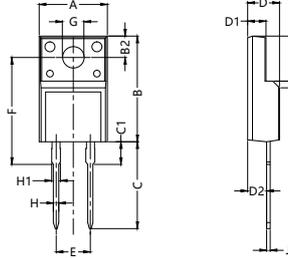
Ultra Fast Recovery Diodes



1. Cathode 3. Anode



Dimensions TO-220F-2L



Dim.	Millimeter		Dim.	Millimeter	
	Min.	Max.		Min.	Max.
A	9.80	10.60	D2	2.30	3.30
B	15.40	16.40	E	5.08BSC	
B1	6.00	7.40	F	14.50	16.00
B2	3.20	3.80	ØG	2.90	3.40
C	12.80	13.50	H	0.60	1.00
C1	3.20	4.00	H1	1.15	1.55
D	4.35	4.95	J	0.35	0.65
D1	2.24	2.84	K	0.00	1.60

	V _{RSM} V	V _{RRM} V
MUR2960F	600	600



Symbol	Test Conditions	Maximum Ratings	Unit
I _{FRMS}	T _{VJ} =T _{VJM}	70	A
I _{FAVM}	T _C =85°C; rectangular, d=0.5	30	
I _{FRM}	t _p <10µs; rep. rating, pulse width limited by T _{VJM}	375	
I _{FSM}	T _{VJ} =45°C	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	A
	T _{VJ} =150°C	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	
I ² t	T _{VJ} =45°C	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	A ² s
	T _{VJ} =150°C	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	
T _{VJ} T _{VJM} T _{stg}		-40...+150 150 -40...+150	°C
P _{tot}	T _C =25°C	125	W
Weight	Typical	2	g

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Ultra Fast Recovery Diodes

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I _R	T _{VJ} =25°C; V _R =V _{RRM}		100	uA
	T _{VJ} =25°C; V _R =0.8·V _{RRM}		50	uA
	T _{VJ} =125°C; V _R =0.8·V _{RRM}		7	mA
V _F	I _F =30A; T _{VJ} =150°C T _{VJ} =25°C		1.4	V
			1.6	
V _{TO}	For power-loss calculations only		1.01	V
r _T	T _{VJ} =T _{VJM}		7.1	mΩ
R _{thJC}			1.5	K/W
t _{tr}	I _F =1A; -di/dt=100A/us; V _R =30V; T _{VJ} =25°C	35	50	ns
I _{RM}	V _R =350V; I _F =29A; -di _F /dt=240A/us; L _s ≤0.05uH; T _{VJ} =100°C	10	11	A

FEATURES

- * International standard package TO-220F-2L
- * Planar passivated chips
- * Very short recovery time
- * Extremely low switching losses
- * Low I_{RM}-values
- * Soft recovery behaviour
- * RoHS compliant

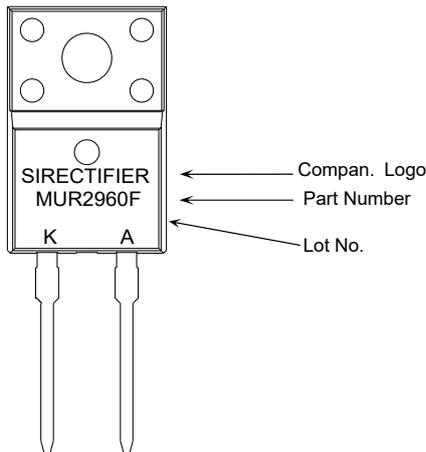
APPLICATIONS

- * 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

MARKING



ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
MUR2960F	TO-220F-2L	50pcs / Tube	MUR2960F

MUR2960F

Ultra Fast Recovery Diodes

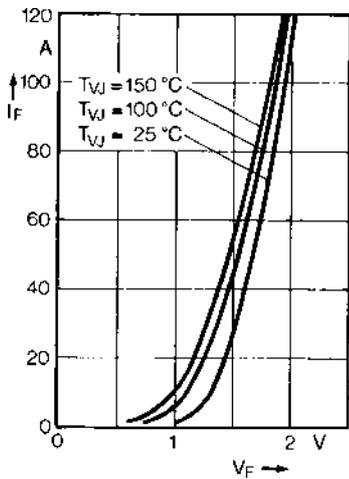


Fig. 1 Forward current versus voltage drop.

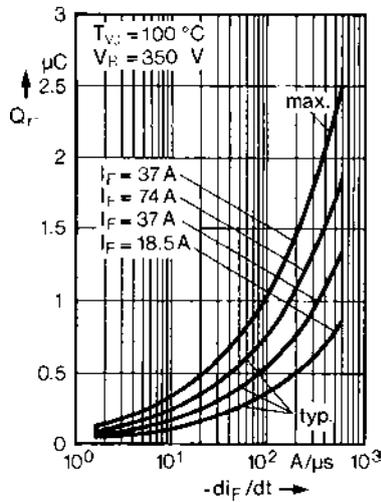


Fig. 2 Recovery charge versus $-di_F/dt$.

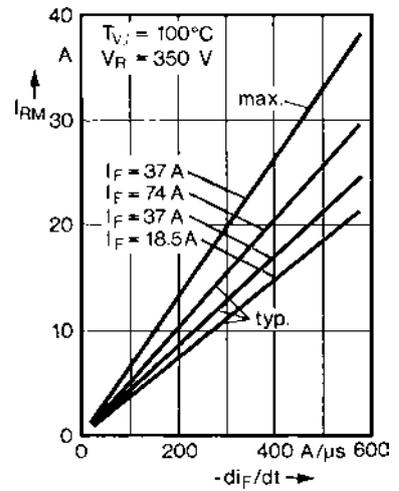


Fig. 3 Peak reverse current versus $-di_F/dt$.

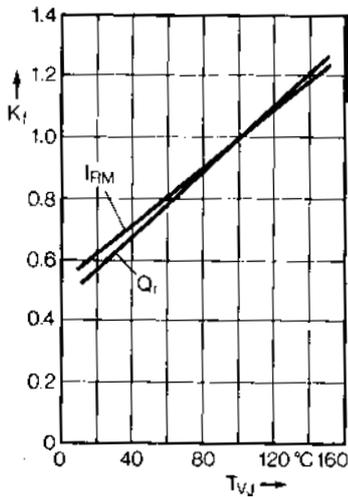


Fig. 4 Dynamic parameters versus junction temperature.

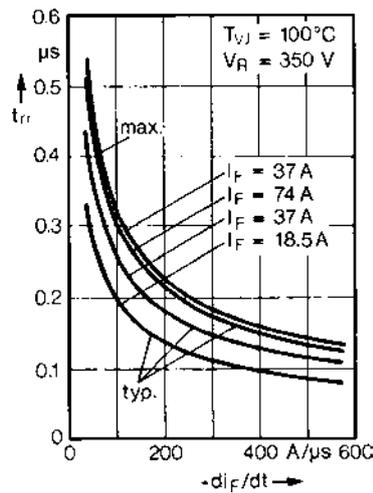


Fig. 5 Recovery time versus $-di_F/dt$.

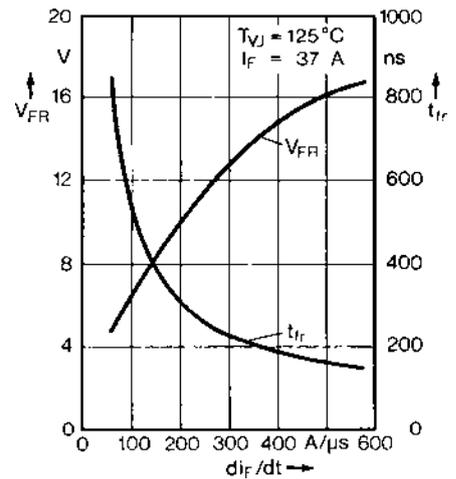


Fig. 6 Peak forward voltage versus di_F/dt .

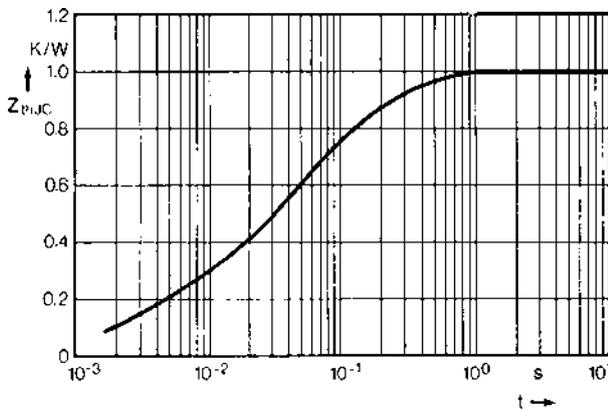


Fig. 7 Transient thermal impedance junction to case.