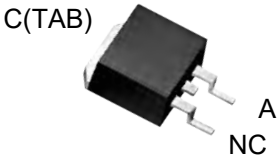
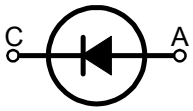
MUR2960S

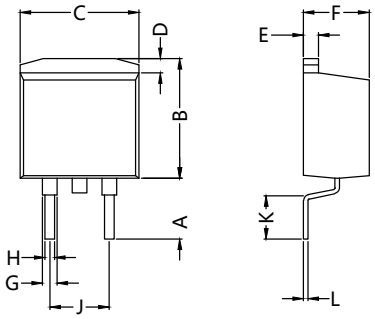
Ultra Fast Recovery Diodes





A=Anode, NC= No connection, TAB=Cathode

Dimensions TO-263(D^2PAK)



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
MUR2960S	600	600

Symbol	Test Conditions		Maximum Ratings	Unit
I_{FRMS} I_{FAVM} I_{FRM}	$T_{VJ}=T_{VJM}$ $T_C=85^oC$; rectangular, d=0.5 $t_P<10us$; rep. rating, pulse width limited by T_{VJM}		70 30 375	A
I_{FSM}	$T_{VJ}=45^oC$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	300 320	A
	$T_{VJ}=150^oC$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	260 280	
I^2t	$T_{VJ}=45^oC$	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	450 420	A^2s
	$T_{VJ}=150^oC$	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	340 320	
T_{VJ} T_{VJM} T_{stg}			-40...+150 150 -40...+150	^oC
P_{tot}	$T_C=25^oC$		125	W
Weight	Typical		1.6	g

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Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	T_{VJ}=25°C; V_R=V_{RRM} T_{VJ}=25°C; V_R=0.8·V_{RRM} T_{VJ}=125°C; V_R=0.8·V_{RRM}		100 50 7	uA uA mA
V_F	I_F=29A; T_{VJ}=150°C T_{VJ}=25°C		1.4 1.6	V
V_{TO}	For power-loss calculations only		1.01	V
r_T	T_{VJ}=T_{VJM}		7.1	mΩ
R_{thJC}			1.0	K/W
t_{rr}	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≤0.05uH; T_{VJ}=100°C	10	11	A

FEATURES

* International standard package JEDEC TO-263
* Glass passivatd chips
* Very short recovery time
* Extremely low switching losses
* Low I_{RM}-values
* Soft recovery behaviour
* RoHS compliance

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

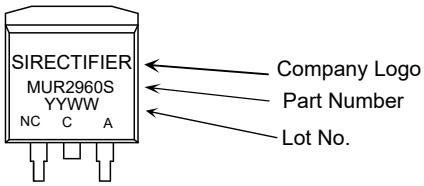
ADVANTAGES

* 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

MUR2960S

(TO-263)



Ordering Information

Part Number	Package	Shipping	Marking Code
MUR2960S	TO-263	50pcs / Tube or 800pcs / Tape & Reel or 1000pcs / Tape & Reel	MUR2960S

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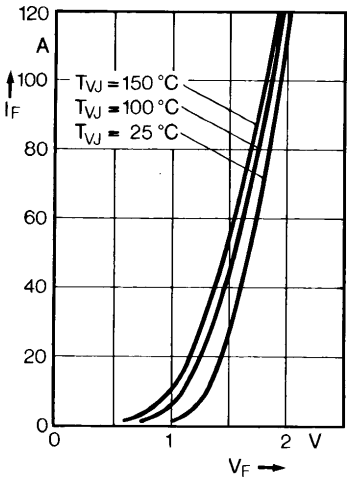

Fig. 1 Forward current versus voltage drop.

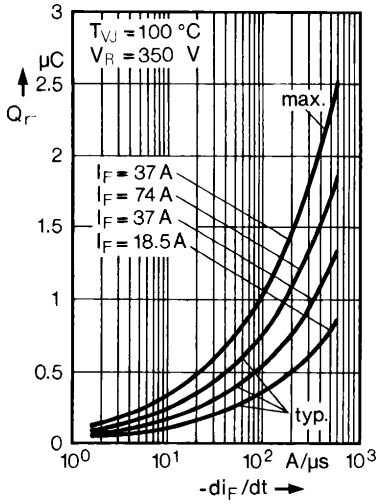

Fig. 2 Recovery charge versus $-di_F/dt$.

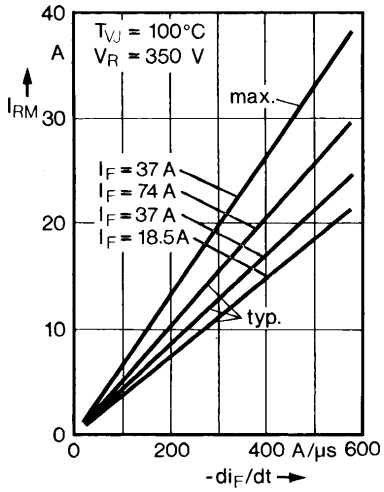

Fig. 3 Peak reverse current versus $-di_F/dt$.

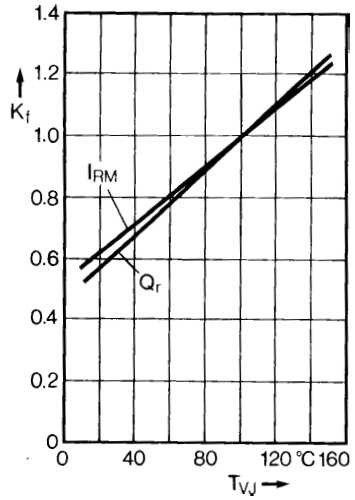

Fig. 4 Dynamic parameters versus junction temperature.

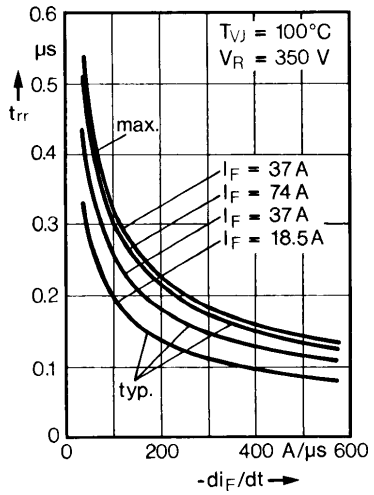

Fig. 5 Recovery time versus $-di_F/dt$.

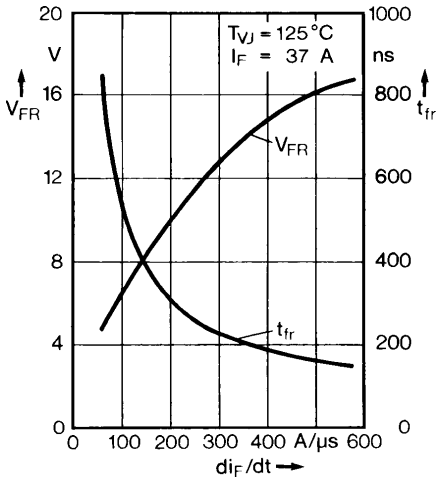

Fig. 6 Peak forward voltage versus di_F/dt.

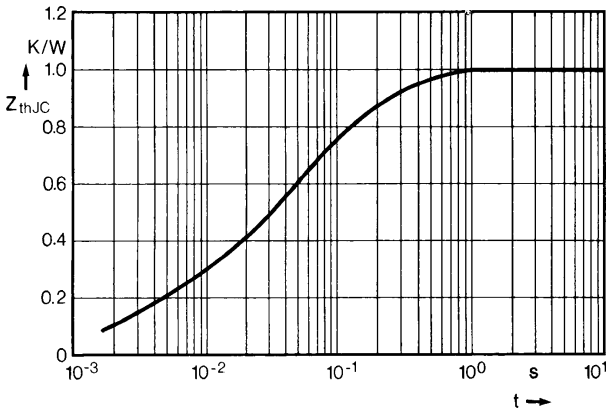

Fig. 7 Transient thermal impedance junction to case.

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