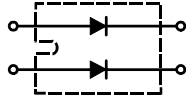
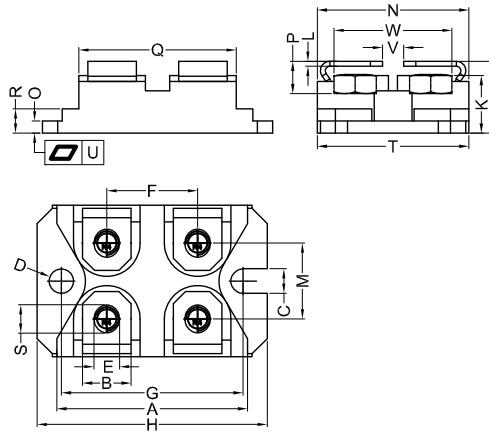


HUR2x120-40

Soft Recovery Behaviour High-Performance Wide Temperature Range Ultra Fast Recovery Epitaxial Diodes



Dimensions SOT-227



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	31.30	31.62	1.232	1.245
B	7.80	8.20	0.307	0.323
C	4.09	4.29	0.161	0.169
D	4.09	4.29	0.161	0.169
E	4.09	4.29	0.161	0.169
F	14.91	15.11	0.587	0.595
G	30.12	30.30	1.186	1.193
H	38.20	38.56	1.504	1.518
J	12.30	12.90	0.484	0.507
K	8.92	9.60	0.351	0.378
L	0.76	0.84	0.030	0.033
M	12.20	14.00	0.480	0.551
N	25.15	25.62	0.990	1.008
O	1.98	2.13	0.078	0.084
P	4.15	4.62	0.163	0.181
Q	25.90	26.30	1.019	1.035
R	3.94	4.42	0.155	0.174
S	4.45	4.85	0.175	0.191
T	24.59	25.07	0.968	0.987
U	0.05	0.10	0.002	0.004
V	3.00	4.80	0.118	0.189
W	19.81	21.08	0.780	0.830

	V_{RSM} V	V_{RRM} V
HUR2x120-40	400	400

Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS} I_{FAVM}	$T_C=70^{\circ}C$; rectangular, $d=0.5$	120 120	A
I_{FSM}	$T_{VJ}=45^{\circ}C$; $t_p=10ms$ (50Hz), sine	1200	A
E_{AS}	$T_{VJ}=25^{\circ}C$; non-repetitive; $I_{AS}=4A$; $L=182\mu H$	2	mJ
I_{AR}	$V_A=1.5 \cdot V_R$ typ.; $f=10kHz$; repetitive	0.4	A
T_{VJ} T_{VJM} T_{stg}		-40...+150 150 -40...+150	$^{\circ}C$
P_{tot}	$T_C=25^{\circ}C$	250	W
V_{ISOL}	50/60Hz, RMS $I_{ISOL} \leq 1mA$	2500	V~
M_d	mounting torque (M4) terminal connection torque (M4)	1.1-1.5/9-13 1.1-1.5/9-13	Nm/lb.in.
Weight	typical	30	g



HUR2x120-40

Soft Recovery Behaviour High-Performance Wide Temperature Range Ultra Fast Recovery Epitaxial Diodes

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	T _{VJ} =25°C; V _R =V _{RRM} T _{VJ} =150°C; V _R =V _{RRM}		0.01 0.50	mA
V_F	I _F =120A; T _{VJ} =150°C T _{VJ} =25°C		1.06 1.24	V
R_{thJC} R_{thCH}	with heatsink compound	0.1	0.6	K/W
t_{rr}	I _F =1A; -di/dt=400A/us; V _R =30V; T _{VJ} =25°C	30		ns
I_{RM}	V _R =100V; I _F =200A; -diF/dt=100A/us; T _{VJ} =100°C	5.5	6.8	A

FEATURES

- * International standard package SOT-227
- * Isolation voltage 2500 V~
- * 2 independent FRED in 1 package
- * 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
- * Uninterruptible power supplies (UPS)
- * Ultrasonic cleaners and welders

ADVANTAGES

- * Avalanche voltage rated for reliable operation
- * Soft reverse recovery for low EMI/RFI
- * Low I_{RM} reduces:
 - Power dissipation within the diode
 - Turn-on loss in the commutating switch

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Soft Recovery Behaviour High-Performance Wide Temperature Range Ultra Fast Recovery Epitaxial Diodes

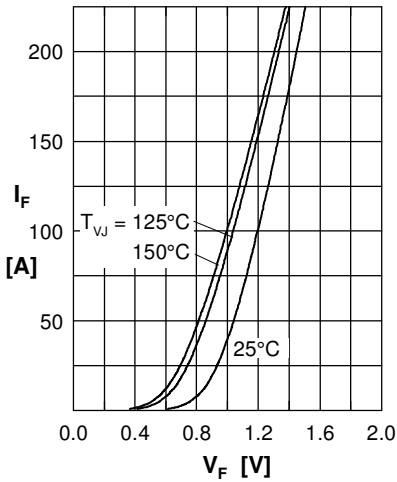


Fig. 1 Forward current I_F vs. V_F

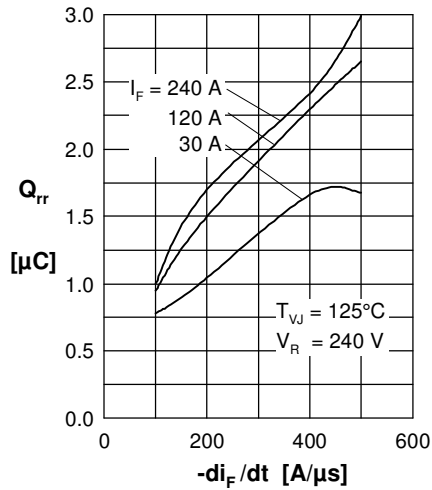


Fig. 2 Typ. reverse recovery charge Q_{rr} vs. $-di_F/dt$

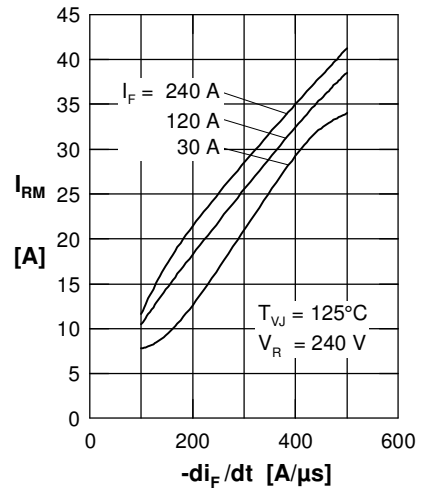


Fig. 3 Typ. reverse recovery current I_{RM} vs. $-di_F/dt$

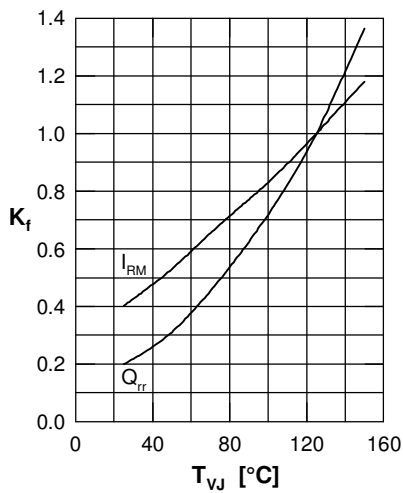


Fig. 4 Typ. dynamic parameters Q_{rr} , I_{RM} vs. T_{VJ}

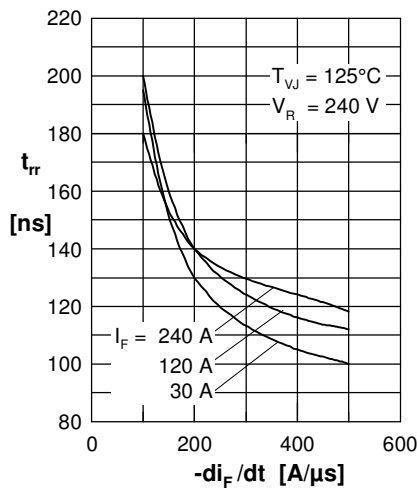


Fig. 5 Typ. reverse recovery time t_{rr} vs. $-di_F/dt$

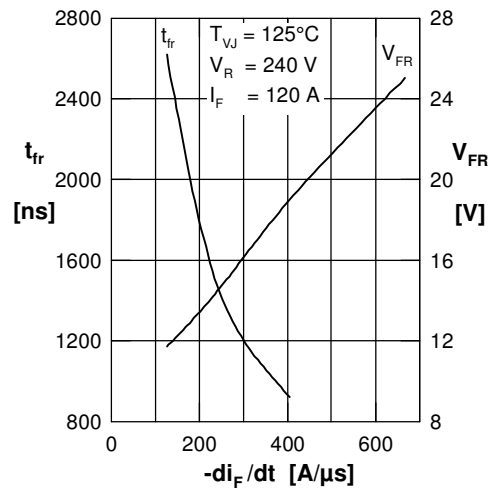


Fig. 6 Typ. forward recovery voltage V_{FR} & t_{fr} vs. di_F/dt



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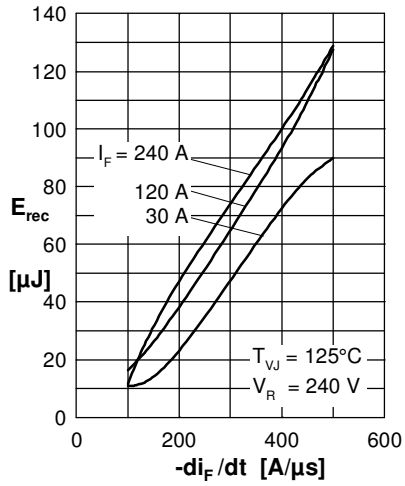


Fig. 7 Typ. recovery energy E_{rec} vs. $-di_F/dt$

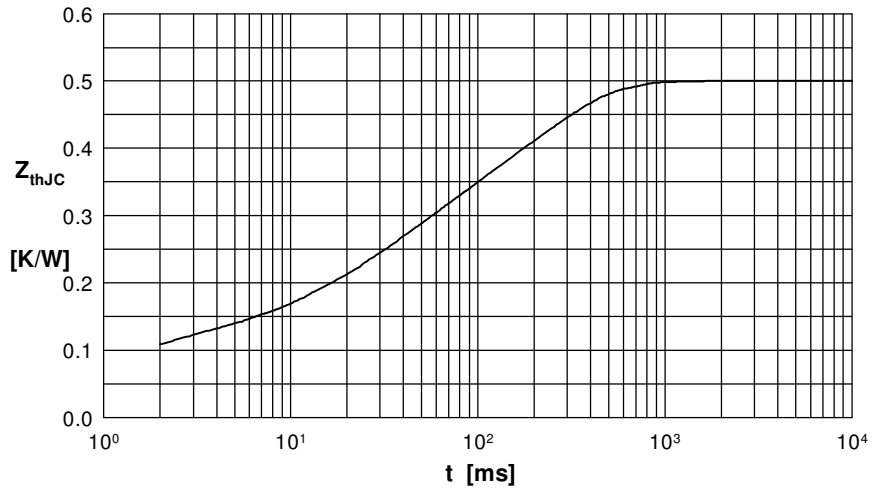


Fig. 8 Transient thermal impedance junction to case

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