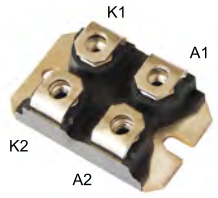
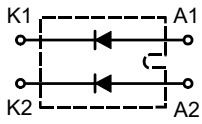
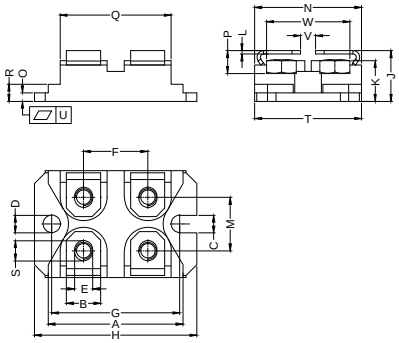
HUR2x100-80

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





Dimensions SOT -227



Dim.	Millimeter		Dim.	Millimeter	
	Min.	Max.		Min.	Max.
A	31.30	31.65	M	12.00	13.00
B	7.80	8.40	N	25.15	25.65
C	4.00	4.30	O	1.95	2.15
D	Ø4.00	Ø4.30	P	5.60	6.60
E	4.00	4.30	Q	25.30	26.30
F	14.90	15.20	R	3.90	4.30
G	30.10	30.30	S	4.45	4.85
H	38.00	38.50	T	24.50	25.10
J	12.10	12.90	U	0.05	0.10
K	9.00	9.60	V	3.00	4.80
L	0.75	0.85	W	19.30	20.50

	V_{RSM} V	V_{RRM} V
HUR2x100-80	800	800

Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS} I_{FAVM}	T_C=60°C; rectangular, d=0.5	100 100	A
I_{FSM}	T_{VJ}=45°C; t_p=10ms (50Hz), sine	980	A
E_{AS}	T_{VJ}=25°C; non-repetitive; I_{AS}=3A; L=182uH	2.4	mJ
I_{AR}	V_A=1.5·V_R typ.; f=10kHz; repetitive	0.35	A
T_{VJ} T_{VJM} T_{stg}		-40...+150 150 -40...+150	°C
P_{tot}	T_C=25°C	260	W
V_{ISOL}	50/60Hz, RMS, I_{ISOL}≤1mA, 1 min 1 sec	2500 3000	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

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com

HUR2x100-80

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}		1 14	mA
V_F	I_F=100A; T_{VJ}=150°C T_{VJ}=25°C	1.57 1.77	1.75 1.90	V
R_{thJC} R_{thCH}	with heatsink compound	 0.12	0.55	K/W
t_{rr}	I_F=1A; -di/dt=400A/us; V_R=30V; T_{VJ}=25°C	45		ns
I_{RM}	V_R=100V; I_F=200A; -di$_F$/dt=100A/us; T_{VJ}=100°C	3.9	6.3	A

FEATURES

* International standard package SOT-227
* Isolation voltage 2500 V~
* 2 independent HiperFRED in 1 package
* Planar passivated chips
* Very short recovery time
* Extremely low switching losses
* Low I_{RM}-values
* Soft recovery behaviour
* UL File NO.E310749
* RoHS compliant

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

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

ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
HUR2X100-80	SOT-227	10pcs / Tube	HUR2X100-80

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com

HUR2x100-80

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

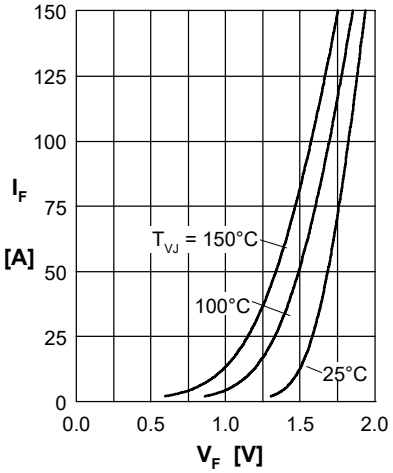


Fig. 1 Forward current I_F versus V_F

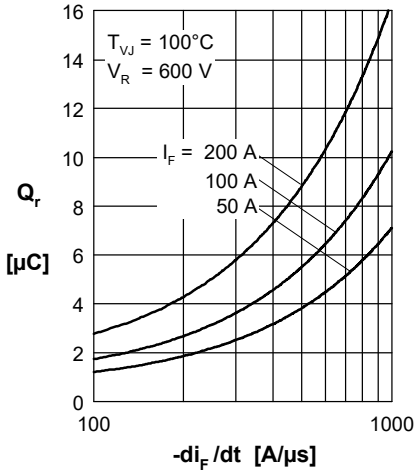


Fig. 2 Typ. reverse recov. charge Q_{rr} versus $-di_F/dt$

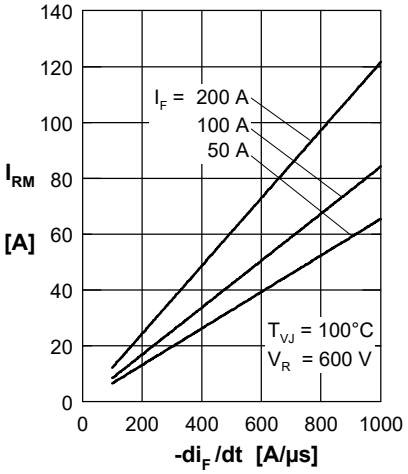


Fig. 3 Typ. peak reverse current I_{rr} versus $-di_F/dt$

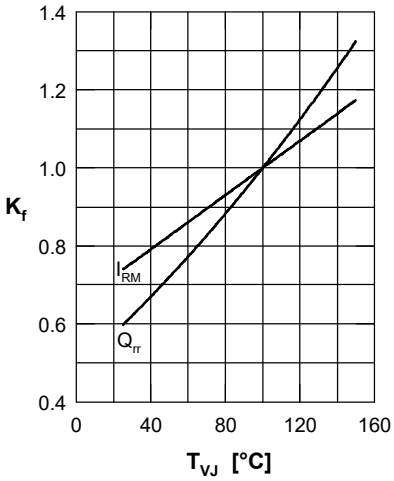


Fig. 4 Dyn. parameters Q_r, I_{RM} versus T_{VJ}

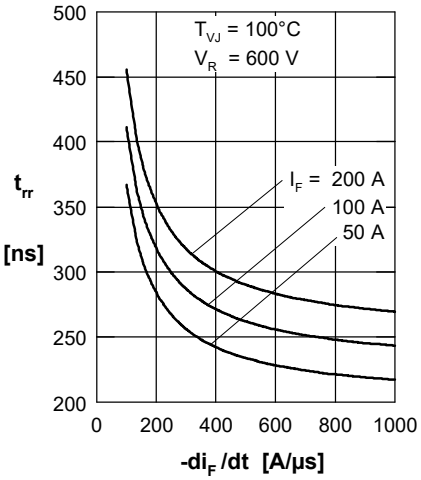


Fig. 5 Typ. recovery time t_{rr} versus $-di_F/dt$

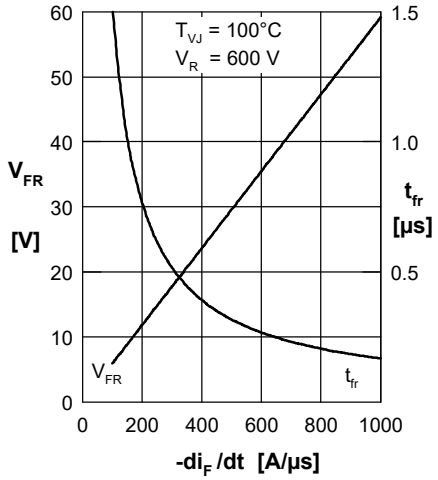


Fig. 6 Typ. peak forward voltage V_{FR} and t_{fr} versus di_F/dt

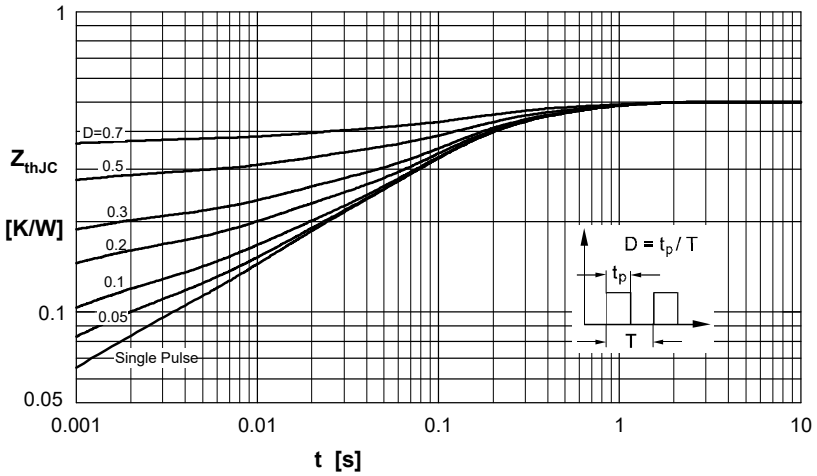


Fig. 7 Transient thermal impedance junction to case

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.020	0.00002
2	0.050	0.00081
3	0.076	0.01000
4	0.240	0.09400
5	0.114	0.45000

www.sirectifier.com Tel: +86-519-86800000 Fax: +86-519-88019019 E-mail: sales@sirectifier.com