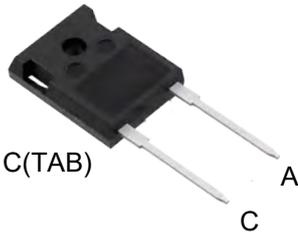


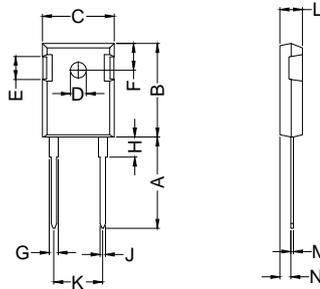
HUR60120

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



A=Anode, C=Cathode, TAB=Cathode

Dimensions TO-247AC



Dim.	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	19.81	20.32	0.780	0.800
B	20.80	21.46	0.819	0.845
C	15.75	16.26	0.620	0.640
ØD	3.15	3.65	0.124	0.144
E	4.32	5.49	0.170	0.216
F	5.40	6.30	0.213	0.248
G	1.65	2.13	0.065	0.084
H	3.80	4.50	0.150	0.177
J	1.00	1.40	0.039	0.055
K	10.80	11.10	0.425	0.437
L	4.70	5.30	0.185	0.209
M	0.40	0.80	0.016	0.031
N	1.50	2.49	0.059	0.098

	V _{RSM}	V _{RSM}
	V	V
HUR60120	1200	1200



Symbol	Test Conditions	Maximum Ratings	Unit
I _{FRMS}	T _C =90°C; rectangular, d=0.5	70	A
I _{FAVM}		60	
I _{FSM}	T _{VJ} =45°C; t _p =10ms (50Hz), sine	500	A
E _{AS}	T _{VJ} =25°C; non-repetitive; I _{AS} =14.5A; L=180uH	23	mJ
I _{AR}	V _A =1.25·V _R typ.; f=10kHz; repetitive	1.5	A
T _{VJ}		-55...+175	°C
T _{VJM}		175	
T _{stg}		-55...+150	
P _{tot}	T _C =25°C	230	W
M _d	mounting torque	0.8...1.2	Nm
Weight	typical	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} =150°C; V _R =V _{RRM}		650	uA
			2.5	mA
V _F	I _F =60A; T _{VJ} =150°C T _{VJ} =25°C		1.74	V
			2.66	
R _{thJC} R _{thCH}		0.25	0.65	K/W
t _{tr}	I _F =1A; -di/dt=300A/us; V _R =30V; T _{VJ} =25°C	40		ns
I _{RM}	V _R =100V; I _F =130A; -di _F /dt=100A/us; T _{VJ} =100°C	7	14.3	A

FEATURES

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

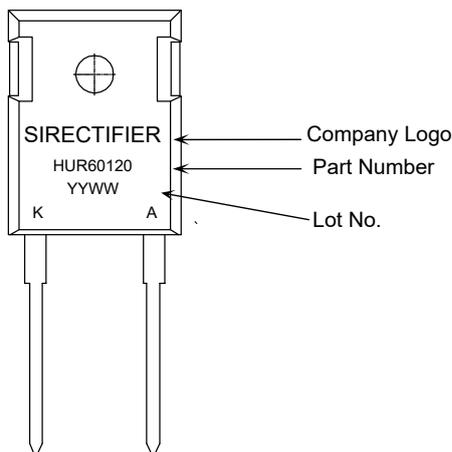
APPLICATIONS

- * 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

MARKING



ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
HUR60120	TO-247AC	30pcs / Tube	HUR60120

HUR60120

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

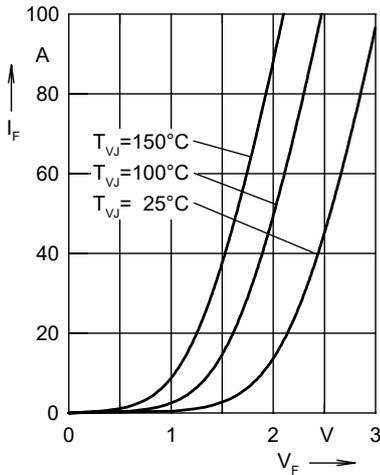


Fig. 1 Forward current I_F versus V_F

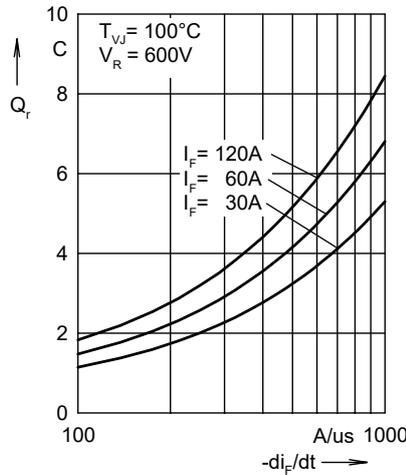


Fig. 2 Reverse recovery charge Q_r versus $-di_F/dt$

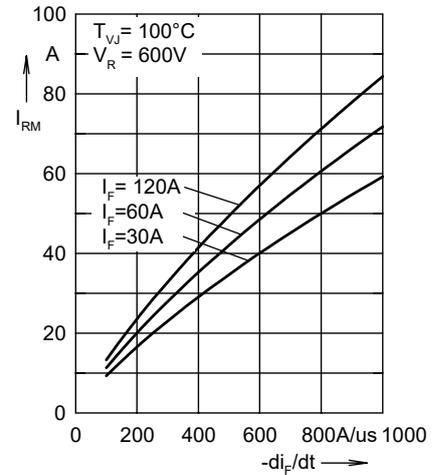


Fig. 3 Peak reverse current I_{RM} versus $-di_F/dt$

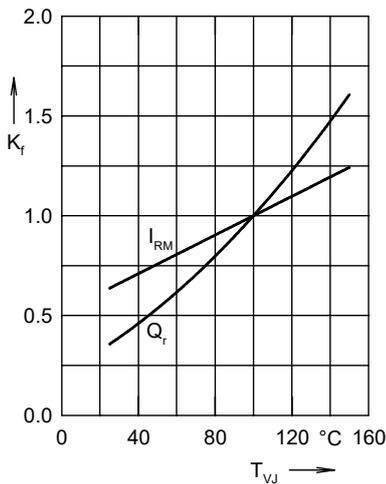


Fig. 4 Dynamic parameters Q_r , I_{RM} versus T_{VJ}

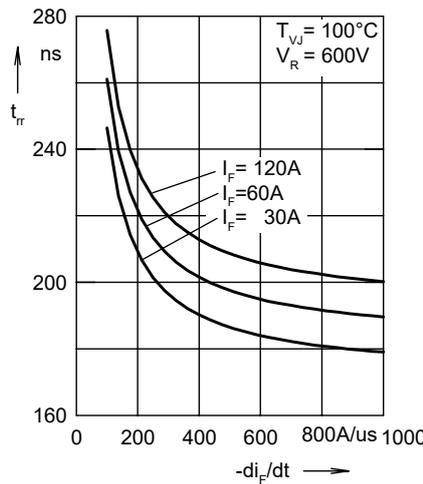


Fig. 5 Recovery time t_{tr} versus $-di_F/dt$

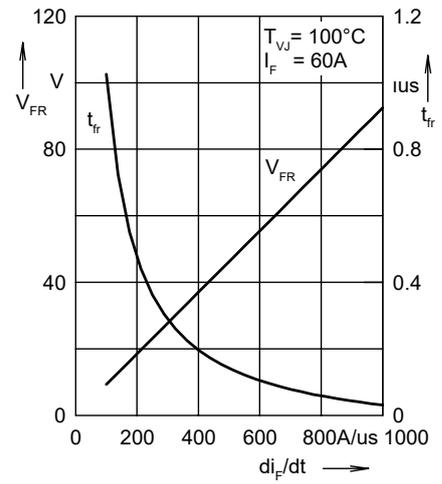
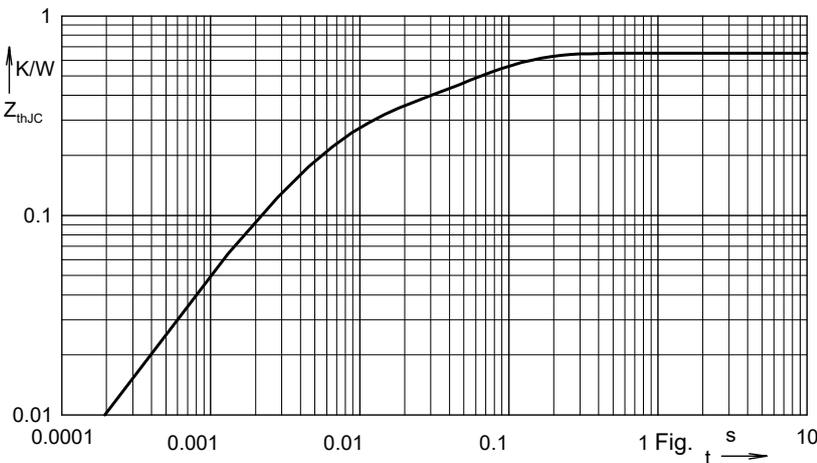


Fig. 6 Peak forward voltage V_{FR} and t_{tr} versus di_F/dt



7 Transient thermal resistance junction to case

Constants for Z_{thJC} calculation:

i	R_{thi} (K/W)	t_i (s)
1	0.324	0.0052
2	0.125	0.0003
3	0.201	0.038