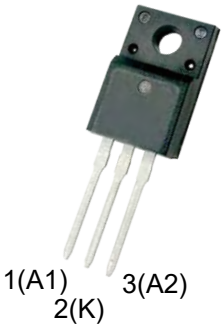
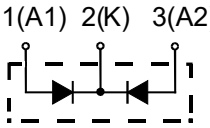
HUR2060CTA1

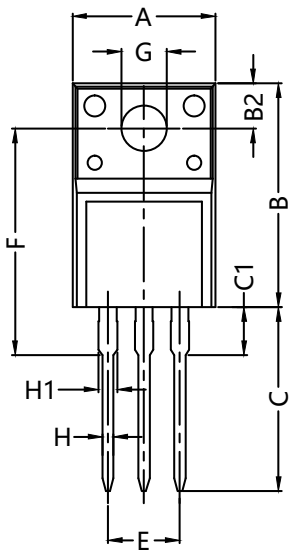
Soft Recovery Behaviour High-Performance Wide Temperature Range Ultra Fast Recovery Epitaxial Diodes

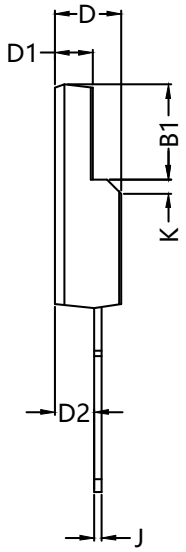




A1 = Anode 1
A2 = Anode 2
K = Cathode

Dimensions **TO-220F**





	V_{RSM} V	V_{RRM} V
HUR2060CTA1	220	200

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Test Conditions	Values	Unit
V_R	Maximum D.C. Reverse Voltage		600	V
V_{RRM}	Maximum Repetitive Reverse Voltage		600	V
$I_{F(AV)}$	Average Forward Current	T_C=110°C, Per Diode	10	A
		T_C=110°C, Per Package	20	A
$I_{F(RMS)}$	RMS Forward Current	T_C=110°C, Per Diode	14	A
I_{FSM}	Non-Repetitive Surge Forward Current	T_J=45°C, t=10ms, 50Hz, Sine	150	A
P_D	Power Dissipation		80	W
T_J	Junction Temperature		-40 to +150	°C
T_{STG}	Storage Temperature Range		-40 to +150	°C
$R_{\theta JC}$	Thermal Resistance	Junction-to-Case	2.23	°C /W
V_{ISO}	1min / 1 sec	Terminal-to-Case	2000/2500	VAC
Weight			2	g

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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	V_R=600V	--	--	10	μA
		V_R=600V, T_J=125°C	--	--	10	mA
V_F	Forward Voltage	I_F=10A	--	1.40	1.60	V
		I_F=10A, T_J=125°C	--	--	1.25	V
t_{rr}	Reverse Recovery Time	I_F=1A, V_R=30V, di_F/dt=-200A/μs	--	40	55	ns
t_{rr}	Reverse Recovery Time	V_R=100V, I_F=10A di_F/dt=-200A/μs, T_J =25°C	--	60	90	ns
I_{RRM}	Max. Reverse Recovery Current		--	2.1	--	A
t_{rr}	Reverse Recovery Time	V_R=100V, I_F=10A di_F/dt=-200A/μs, T_J =125°C	--	95	115	ns
I_{RRM}	Max. Reverse Recovery Current		--	5	--	A

FEATURES

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

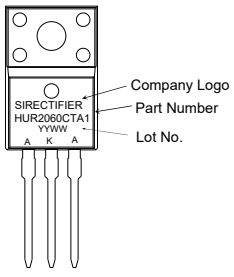
APPLICATIONS

* 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
HUR2060CTA1	TO-220F	50pcs / Tube	HUR2060CTA1

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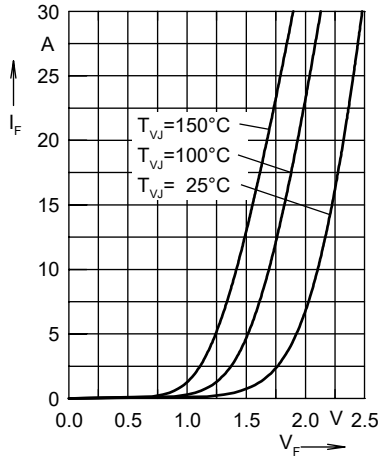

Fig. 1 Forward current I_F versus V_F

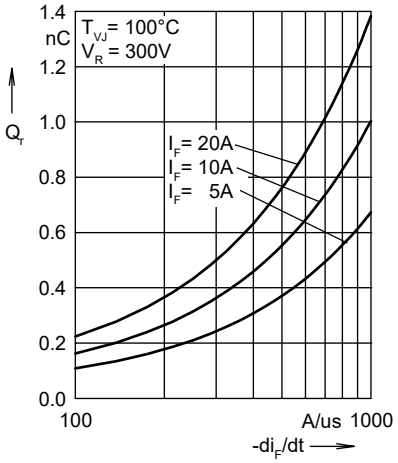

Fig. 2 Reverse recovery charge Q_r versus -di_F/dt

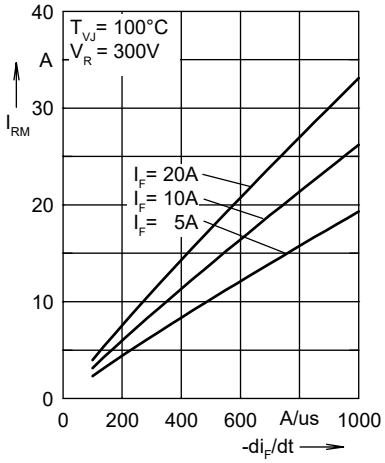

Fig. 3 Peak reverse current I_{RM} versus -di_F/dt

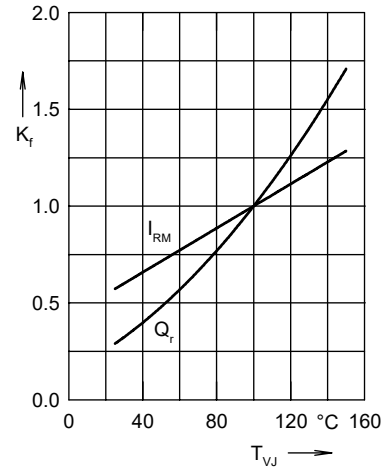

Fig. 4 Dynamic parameters Q_r, I_{RM} versus T_{VJ}

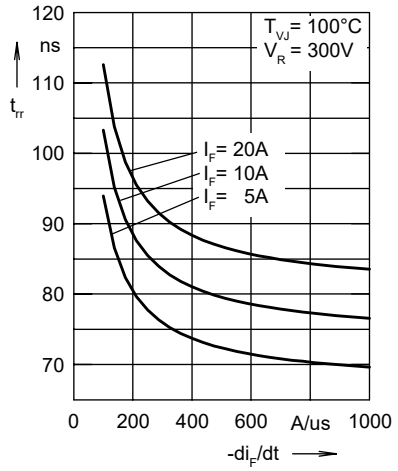

Fig. 5 Recovery time t_{rr} versus -di_F/dt

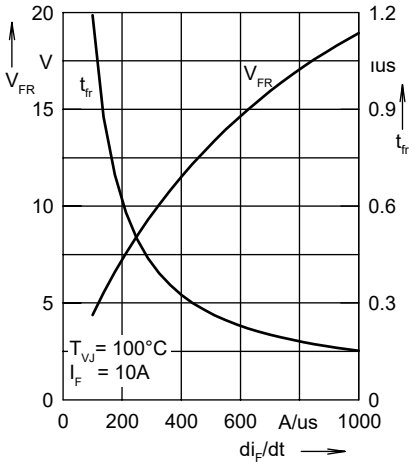

Fig. 6 Peak forward voltage V_{FR} and t_{fr} versus di_F/dt

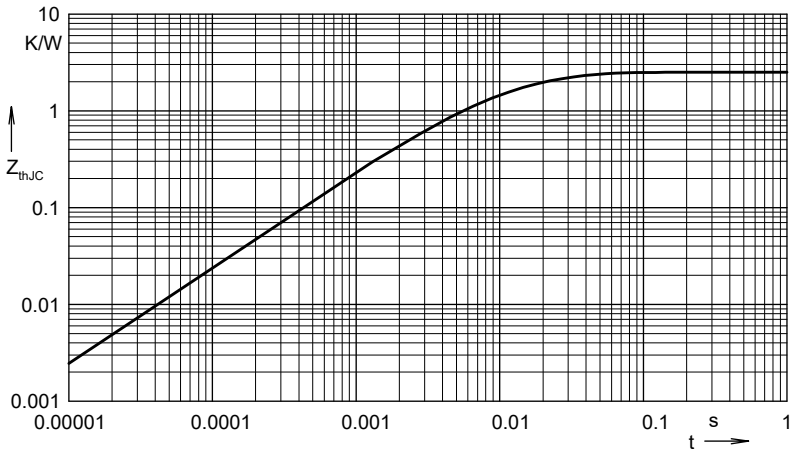

Fig. 7 Transient thermal resistance junction to case

Constants for Z_{thJC} calculation:

i	R_{thi}(K/W)	t_i (s)
1	1.449	0.0052
2	0.5578	0.0003
3	0.4931	0.0169

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