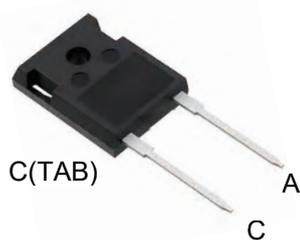


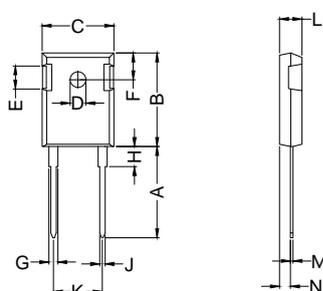
# HUR15060

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	$V_{RRM}$ V
HUR15060	600	600



Symbol	Test Conditions	Maximum Ratings	Unit
$I_{FRMS}$ $I_{FAVM}$ $I_{FRM}$	$T_{VJ}=T_{VJM}$ $T_C=105^{\circ}C$ ; rectangular, $d=0.5$ $t_p < 10\mu s$ ; rep. rating, pulse width limited by $T_{VJM}$	225 150 TBD	A
$I_{FSM}$	$T_{VJ}=45^{\circ}C$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	1500 1800	A
	$T_{VJ}=150^{\circ}C$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	1200 1400	
$I^2t$	$T_{VJ}=45^{\circ}C$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	450 420	$A^2s$
	$T_{VJ}=150^{\circ}C$ $t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	340 320	
$T_{VJ}$ $T_{VJM}$ $T_{stg}$		-40...+175 175 -40...+175	$^{\circ}C$
$P_{tot}$	$T_C=25^{\circ}C$	160	W
$M_d$	Mounting torque	1.2...2.4	Nm
Weight		6	g



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Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
<b>I<sub>R</sub></b>	$T_{VJ}=25^{\circ}\text{C}; V_R=V_{RRM}$		60	uA
	$T_{VJ}=150^{\circ}\text{C}; V_R=V_{RRM}$		5	mA
<b>V<sub>F</sub></b>	$I_F=150\text{A}; T_{VJ}=150^{\circ}\text{C}$		1.20	V
	$T_{VJ}=25^{\circ}\text{C}$		1.65	
<b>R<sub>thJC</sub></b> <b>R<sub>thCH</sub></b>		0.21	0.38	K/W
<b>t<sub>rr</sub></b>	$I_F=1\text{A}; -di/dt=100\text{A/us}; V_R=30\text{V}; T_{VJ}=25^{\circ}\text{C}$	45		ns
<b>I<sub>RM</sub></b>	$V_R=350\text{V}; I_F=30\text{A}; -di_F/dt=240\text{A/us}; T_{VJ}=100^{\circ}\text{C}$		22	A

## FEATURES

- \* International standard package
- \* Planar passivated chips
- \* Very short recovery time
- \* Extremely low switching losses
- \* Low I<sub>RM</sub>-values
- \* Soft recovery behaviour
- \* RoHS compliant

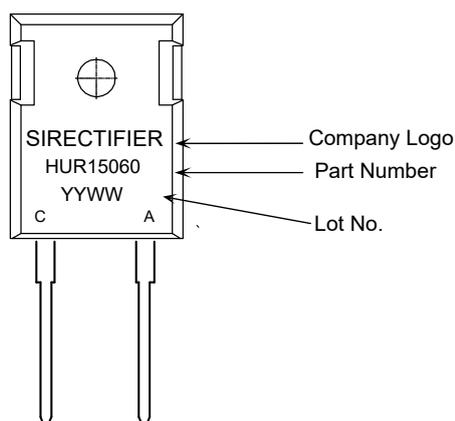
## APPLICATIONS

- \* 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<sub>RM</sub> reduces:
  - Power dissipation within the diode
  - Turn-on loss in the commutating switch

## MARKING



## ORDERING INFORMATION

Part Number	Package	Shipping	Marking Code
HUR15060	TO-247AC	30pcs / Tube	HUR15060

# HUR15060

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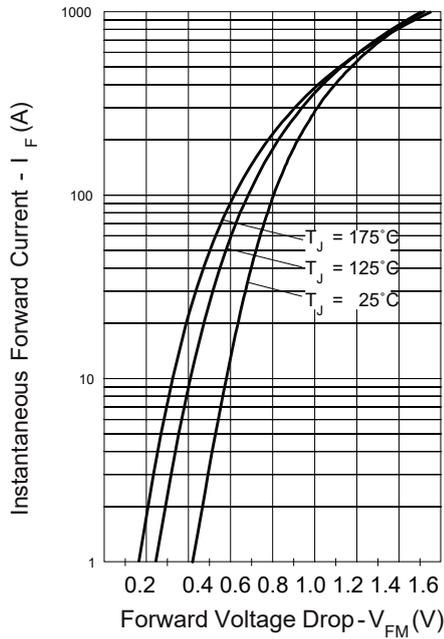


Fig. 1 - Maximum Forward Voltage Drop Characteristics

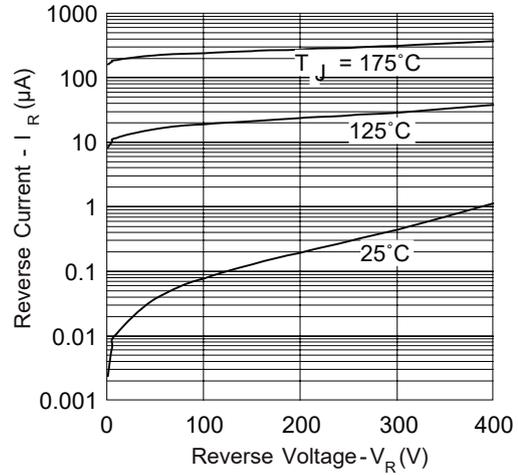


Fig. 2 - Typical Values of Reverse Current vs. Reverse Voltage

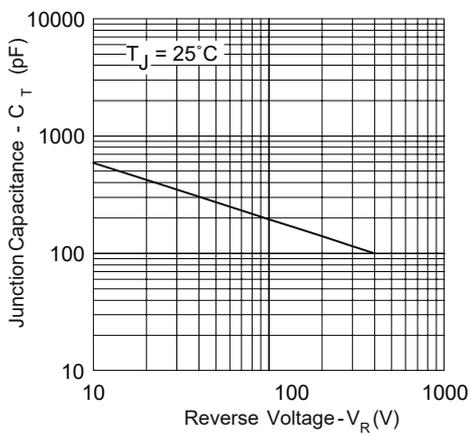


Fig. 3 - Typical Junction Capacitance vs. Reverse Voltage

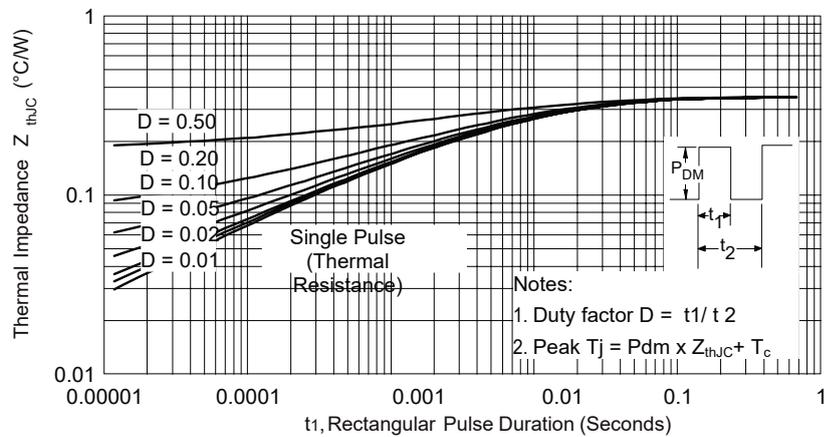


Fig. 4 - Maximum Thermal Impedance  $Z_{thJC}$  Characteristic

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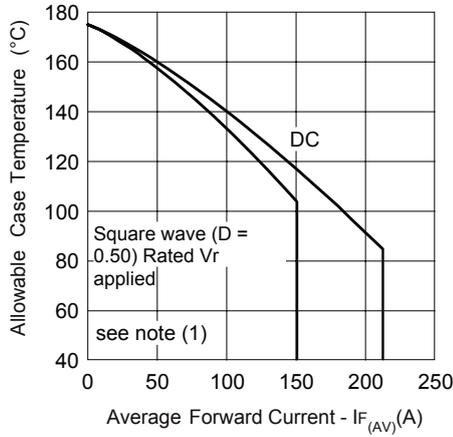


Fig. 5 -Maximum Allowable Case Temperature vs. Average Forward Current

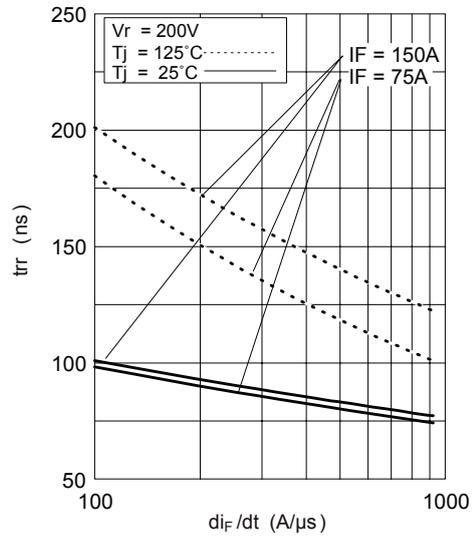


Fig. 7 -Typical Reverse Recovery Time vs.  $di_F / dt$

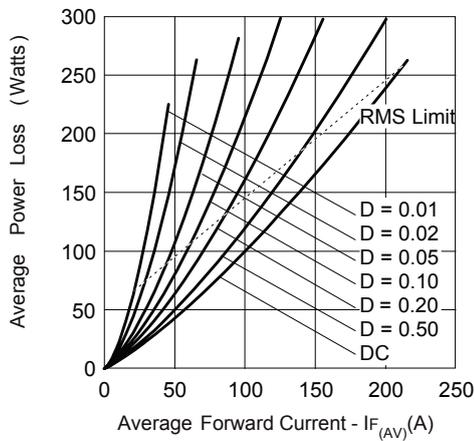


Fig. 6 - Forward Power Loss Characteristics

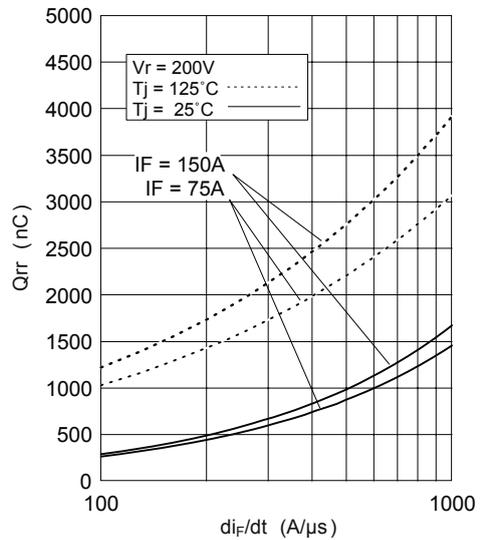


Fig. 8 -Typical Stored Charge vs.  $di_F / dt$