HYD60A12EP

FAST RECOVERY EPITAXIAL DIODE	1200V / 60A V_F=2.5V@I_F=60A, trr=65ns

PRODUCT FEATURES

- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current

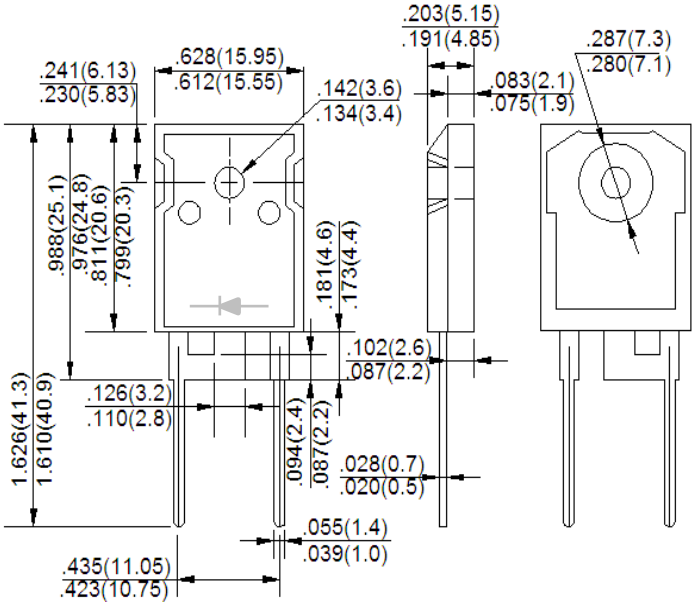
APPLICATIONS

- Freewheeling, Snubber, Clamp
- Inversion Welder
- Plating Power Supply
- Ultrasonic Cleaner and Welder

MECHANICAL DATA

- Case : TO-247AC Modified Molded Plastic
- Epoxy : UL94V-0 rate flame retadant
- Polarity : As Marked

TO-247AC Modified



Dimensions in inches and (millimeter)

ABSOLUTE MAXIMUM RATINGS (T_C=25℃ unless otherwise specified)

PARAMETER		SYMBOL	VALUES	UNIT
		Marking	D60A12EP	
Maximum Repetitive Reverse Voltage		V_{RM}	1200	V
Average Forward Current	T_C=110℃	$I_{F(AV)}$	60	A
RMS Forward Current	T_C=110℃	$I_{F(RMS)}$	82	A
Non-Repetitive Surge Forward Current	t_P=10ms, 50Hz, Half Sine Wave	I_{FSM}	500	A
Power Dissipation		P_D	312	W
Operating Junction and Storage Temperatures		T_J, T_{STG}	-55 to + 150	℃
Thermal Resistance	Junction-to-Case	$R_{\theta JC}$	0.4	℃/w
Module-to-Sink			1.1	Nt.m
Weight			6.0	g

ELECTRICAL AND DYNAMIC RECOVERY CHARACTERISTICS (T_J=25℃, unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	Min.	Typ.	Max.	UNIT
Reverse Leakage Current	V_R=1200V	I_{RM}	-	-	500	μA
	V_R=1200V, T_J=125℃		-	-	5	mA
ForwardVoltage	I_F=60A	V_F	-	2.5	3.2	V
	I_F=60V, T_J=125℃		-	-	2.9	V
Reverse RecoveryTime	I_F=1A, V_R=30V, diF/dt=-200A/μs	trr	-	65	-	ns
Reverse RecoveryTime	V_R=600V, I_F=60A di_F/dt=-200A/μs, T_J=25℃	trr	-	138	-	ns
Max. Reverse Recovery Current		I_{RRM}	-	6.5	-	A
Reverse RecoveryTime	V_R=600V, I_F=60A di_F/dt=-200A/μs, T_J=125℃	trr	-	420	-	ns
Max. Reverse Recovery Current		I_{RRM}	-	12.8	-	A

FIG. 1 - Typical Forward Voltage Drop Characteristics

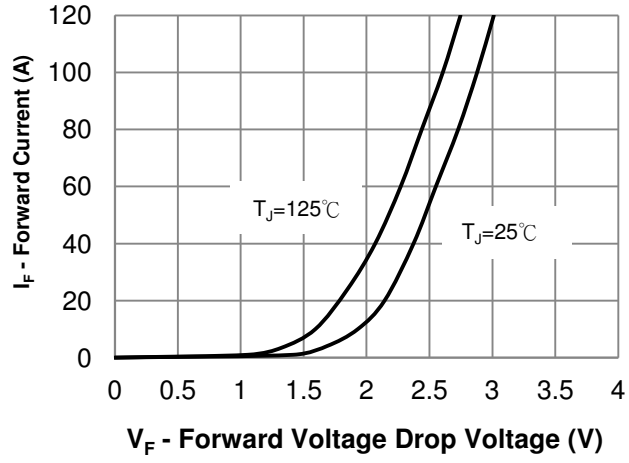


FIG. 2 - Typical Value of Reverse Current vs. Reverse Voltage

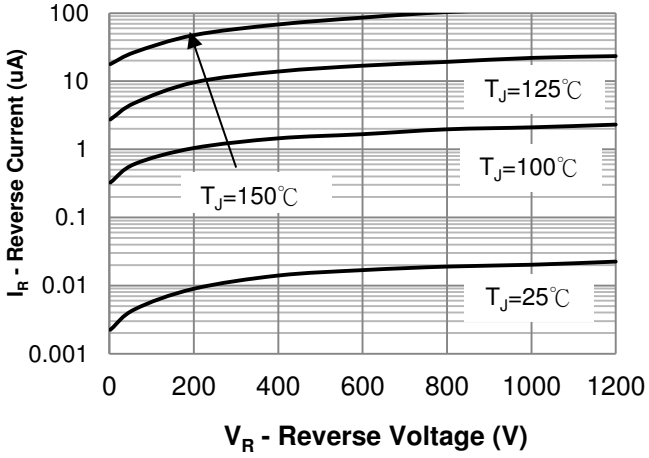


FIG. 3 - Typical Junction Capacitance vs. Reverse Voltage

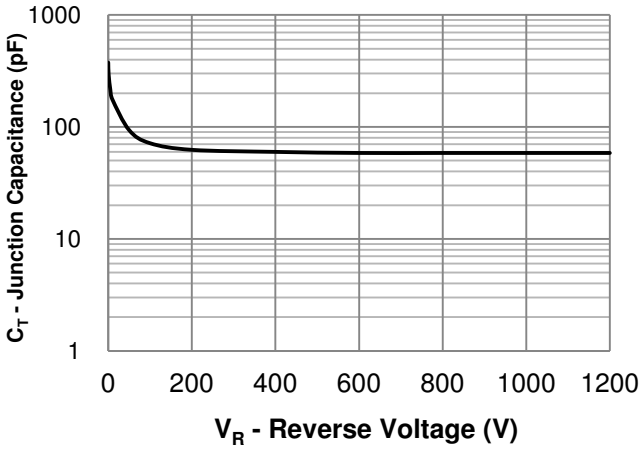


FIG. 4 - Average Forward Current vs. Maximum Allowable Case Temperature