

FAST RECOVERY EPITAXIAL DIODE	1200V / 60A $V_F=2.5V @ I_F=60A, t_{rr}=65ns$
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PRODUCT FEATURES

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

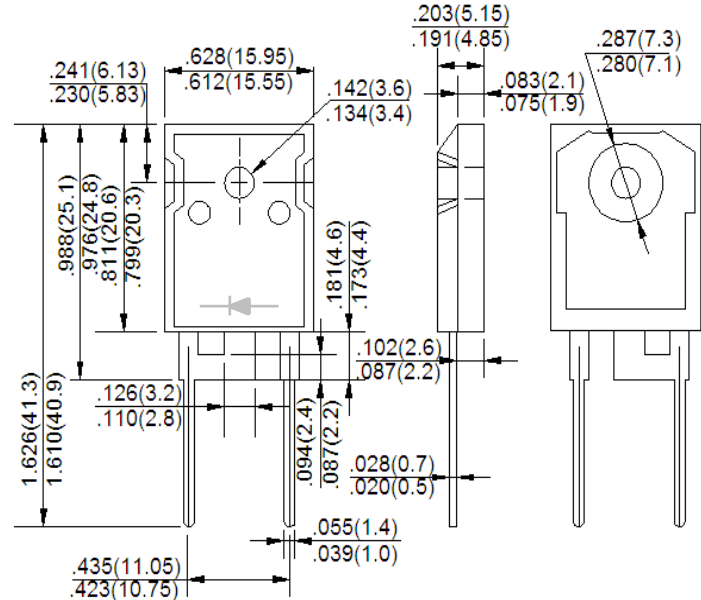
APPLICATIONS

- 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 retardant
- Polarity : As Marked

TO-247AC Modified



ABSOLUTE MAXIMUM RATINGS (T_C=25°C unless otherwise specified)

PARAMETER	SYMBOL	VALUES	UNIT
	Marking	D60A12EP	
Maximum Repetitive Reverse Voltage	V _{RM}	1200	V
Average Forward Current	I _{F(AV)}	60	A
RMS Forward Current	I _{F(RMS)}	82	A
Non-Repetitive Surge Forward Current	I _{FSM}	500	A
Power Dissipation	P _D	312	W
Operating Junction and Storage Temperatures	T _J , T _{STG}	-55 to + 150	°C
Thermal Resistance	Junction-to-Case	R _{θJC}	0.4 °C/w
Module-to-Sink			1.1 Nt.m
Weight			6.0 g

ELECTRICAL AND DYNAMIC RECOVERY CHARACTERISTICS (T_J=25°C, 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°C		-	-	5	mA
Forward Voltage	I _F =60A	V _F	-	2.5	3.2	V
	I _F =60V, T _J =125°C		-	-	2.9	V
Reverse Recovery Time	I _F =1A, V _R =30V, diF/dt=-200A/μs	t _{rr}	-	65	-	ns
Reverse Recovery Time	V _R =600V, I _F =60A	t _{rr}	-	138	-	ns
Max. Reverse Recovery Current	di _F /dt=-200A/μs, T _J =25°C	I _{RRM}	-	6.5	-	A
Reverse Recovery Time	V _R =600V, I _F =60A	t _{rr}	-	420	-	ns
Max. Reverse Recovery Current	di _F /dt=-200A/μs, T _J =125°C	I _{RRM}	-	12.8	-	A

FIG. 1 - Typical Forward Voltage Drop Characteristics

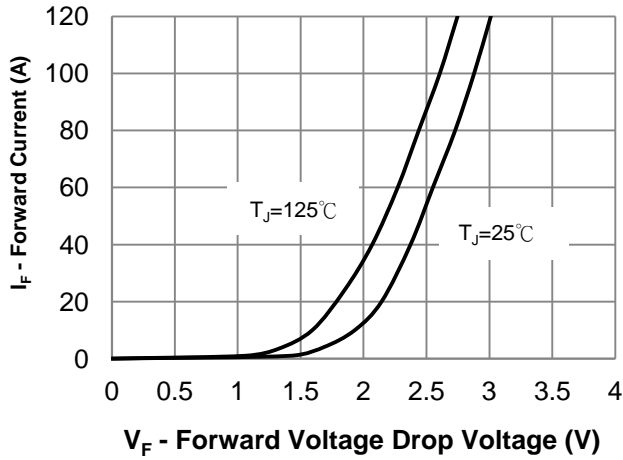


FIG. 2 - Typical Value of Reverse Current vs. Reverse Voltage

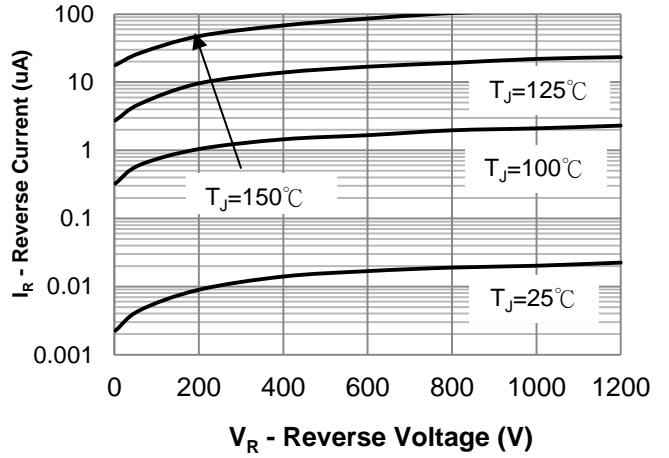


FIG. 3 - Typical Junction Capacitance vs. Reverse Voltage

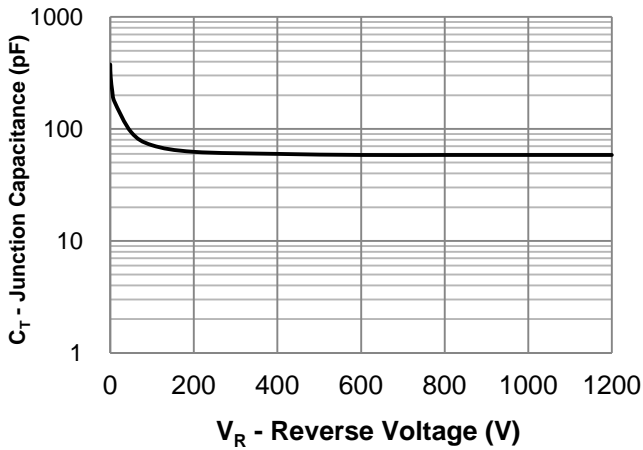


FIG. 4 - Average Forward Current vs. Maximum Allowable Case Temperature

