

FAST RECOVERY EPITAXIAL DIODE

200V / 30A
 $V_F=1.0V@I_F=30A$, $t_{rr}=35ns$

PRODUCT FEATURES

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

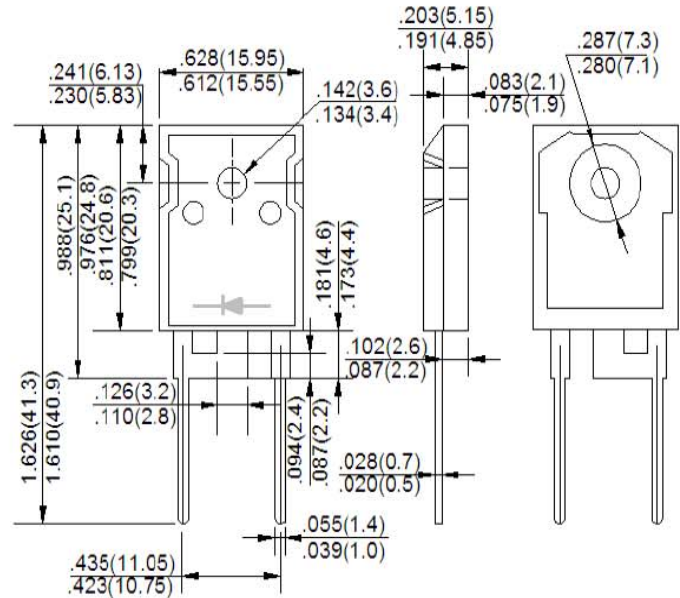
APPLICATIONS

- 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



Dimensions in inches and (millimeter)

ABSOLUTE MAXIMUM RATINGS ($T_C=25^\circ C$ unless otherwise specified)

PARAMETER	SYMBOL	VALUES		UNIT
		Marking	D30A02EP	
Maximum Repetitive Reverse Voltage	V_{RM}		200	V
Average Forward Current	$I_{F(AV)}$		30	A
RMS Forward Current	$I_{F(RMS)}$		52	A
Non-Repetitive Surge Forward Current	I_{FSM}		300	A
Power Dissipation	P_d		156	W
Operating Junction and Storage Temperatures	T_J, T_{STG}		-55 to + 150	$^\circ C$
Thermal Resistance	$R_{\theta JC}$	Junction-to-Case	0.8	$^\circ C/W$
Module-to-Sink			1.1	Nt.m
Weight			6.0	g

ELECTRICAL AND DYNAMIC RECOVERY CHARACTERISTICS ($T_J=25^\circ C$, unless otherwise specified)

PARAMETER	TEST CONDITIONS	SYMBOL	Min.	Typ.	Max.	UNIT
Reverse Leakage Current	$V_R=200V$	I_{RM}	-	-	25	μA
	$V_R=200V, T_J=125^\circ C$		-	-	250	μA
Forward Voltage	$I_F=30A$	V_F	-	0.85	1.0	V
	$I_F=30V, T_J=125^\circ C$		-	-	0.95	V
Reverse Recovery Time	$I_F=1A, V_R=30V, di_F/dt=-200A/\mu s$	t_{rr}	-	25	32	ns
Reverse Recovery Time	$V_R=100V, I_F=30A$	t_{rr}	-	35	-	ns
Max. Reverse Recovery Current	$di_F/dt=-200A/\mu s, T_J=25^\circ C$	I_{RRM}	-	35	-	A
Reverse Recovery Time	$V_R=100V, I_F=30A$	t_{rr}	-	48	-	ns
Max. Reverse Recovery Current	$di_F/dt=-200A/\mu s, T_J=125^\circ C$	I_{RRM}	-	4.2	-	A

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FIG. 1 - Typical Forward Voltage Drop Characteristics

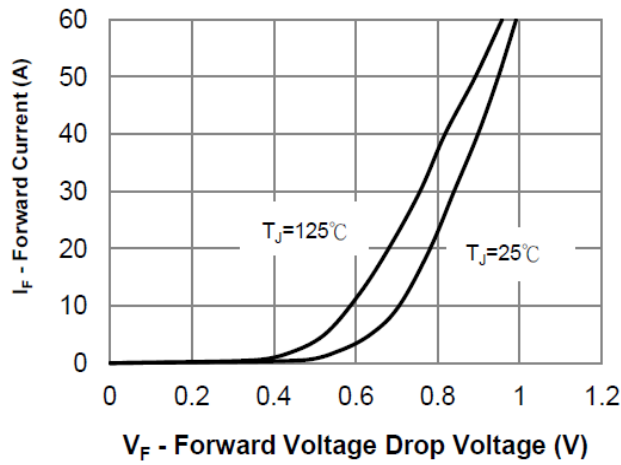


FIG. 2 - Typical Value of Reverse Current vs. Reverse Voltage

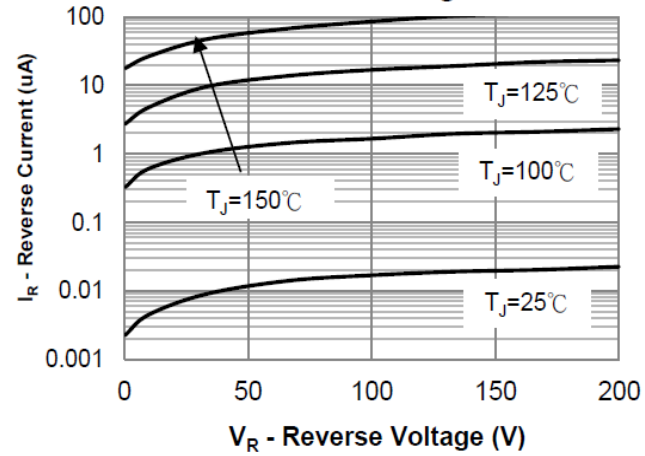


FIG. 3 - Typical Junction Capacitance vs. Reverse Voltage

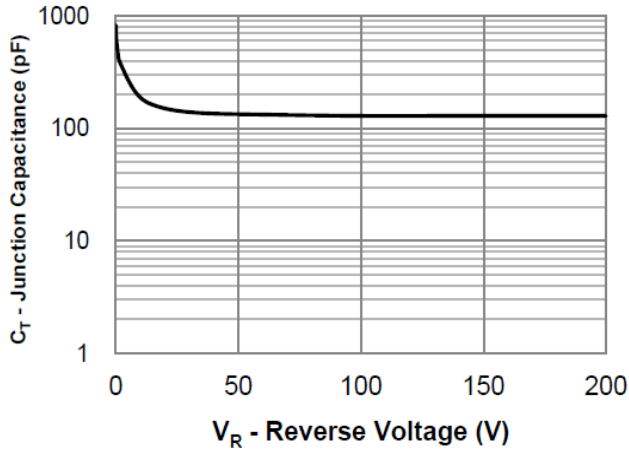


FIG. 4 - Average Forward Current vs. Maximum Allowable Case Temperature

