

FAST RECOVERY EPITAXIAL DIODE

200V / 20A
 $V_F=1.1V@I_F=10A$, $t_{rr}=34ns$

PRODUCT FEATURES

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

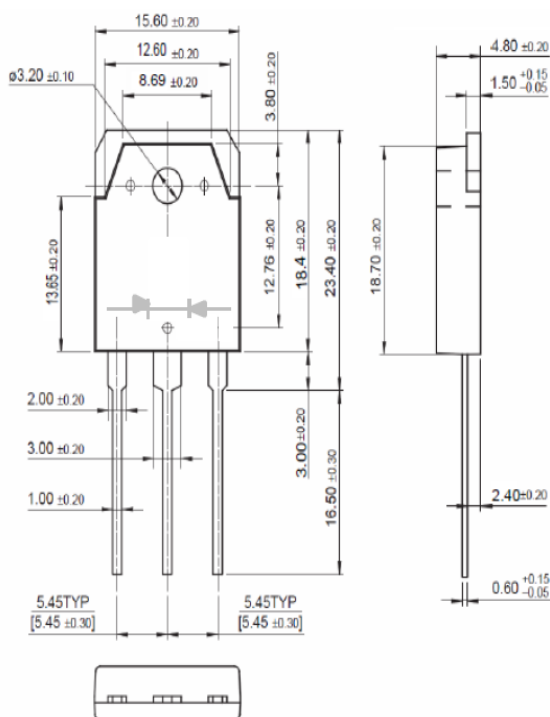
APPLICATIONS

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

MECHANICAL DATA

- Case : TO-3PN Molded Plastic
- Epoxy : UL94V-0 rate flame retardant
- Polarity : As Marked

TO-3PN



Dimensions in millimeter and (inches)

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

PARAMETER		SYMBOL	VALUES	UNIT
		Marking	D92-02	
Maximum Repetitive Reverse Voltage		V _{RM}	200	V
Average Forward Current	T _C =110°C, Per Diode	I _{F(AV)}	10	A
	T _C =110°C, Per Package		20	
RMS Forward Current	T _C =110°C, Per Diode	I _{F(RMS)}	14	A
Non-Repetitive Surge Forward Current	t _p =10ms, 50Hz, Half Sine Wave	I _{FSM}	100	A
Power Dissipation		P _D	83	W
Operating Junction and Storage Temperatures		T _J , T _{STG}	-55 to + 150	°C
Thermal Resistance	Junction-to-Case	R _{θJC}	1.5	°C/w
Module-to-Sink			1.1	Nt.m
Weight			5.2	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	$I_F=10A$	V_F	-	0.95	1.1	V
	$I_F=10A, T_J=125^\circ C$		-	-	0.95	V
Reverse Recovery Time	$I_F=1A, V_R=30V, di_F/dt=-200A/\mu s$	t_{rr}	-	18	-	ns
Reverse Recovery Time	$V_R=100V, I_F=10A$	t_{rr}	-	34	-	ns
Max. Reverse Recovery Current	$di_F/dt=-200A/\mu s, T_J=25^\circ C$	I_{RRM}	-	3.2	-	A
Reverse Recovery Time	$V_R=100V, I_F=10A$	t_{rr}	-	46	-	ns
Max. Reverse Recovery Current	$di_F/dt=-200A/\mu s, T_J=125^\circ C$	I_{RRM}	-	4.8	-	A

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FIG. 1 - Typical Forward Voltage Drop Characteristics

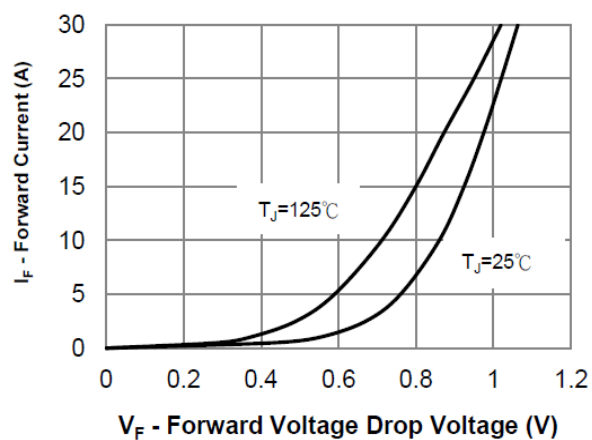


FIG. 2 - Typical Value of Reverse Current vs. Reverse Voltage

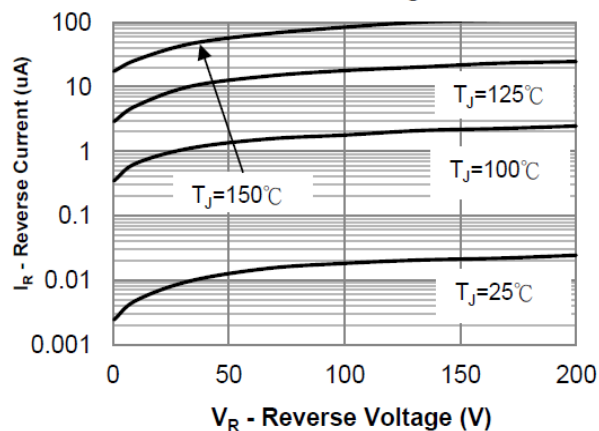


FIG. 3 - Typical Junction Capacitance vs. Reverse Voltage

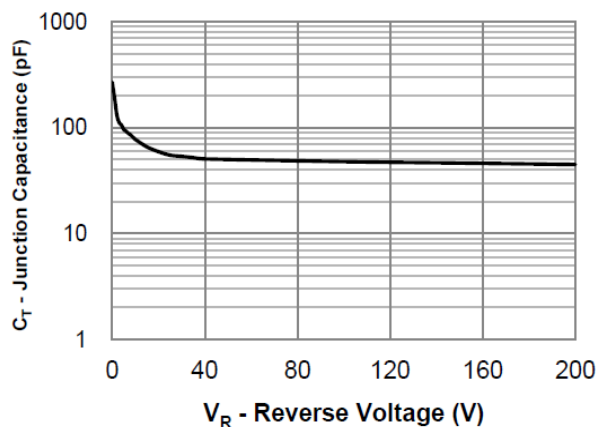
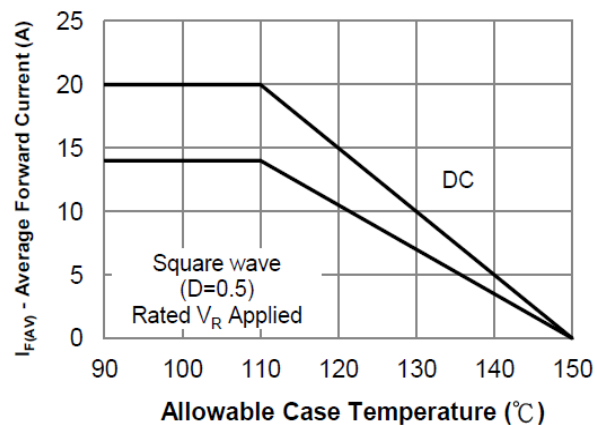


FIG. 4 - Average Forward Current vs. Maximum Allowable Case Temperature



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!

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