

FAST RECOVERY EPITAXIAL DIODE	200V / 20A $V_F=1.1V@I_F=10A, trr=34ns$
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PRODUCT FEATURES

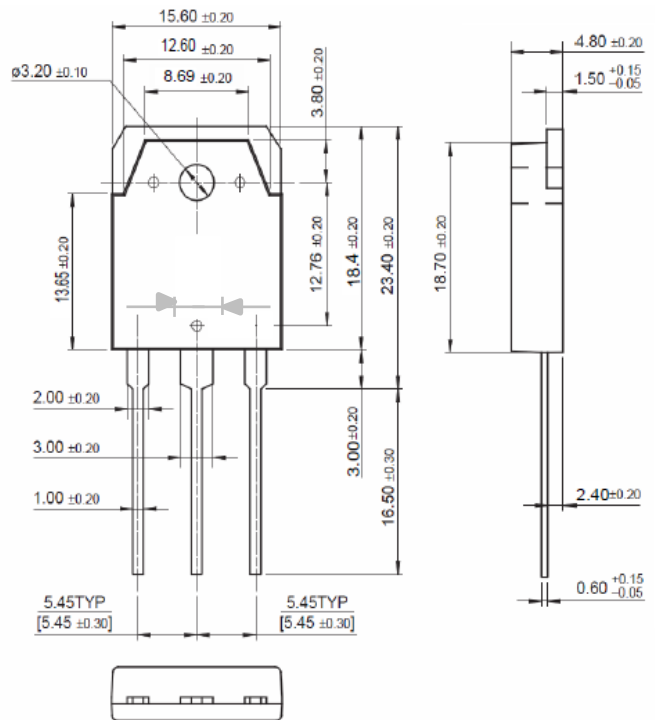
- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current

APPLICATIONS

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

MECHANICAL DATA

- Case : TO-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	$I_{F(AV)}$	$T_C=110^\circ C$, Per Diode	10
		$T_C=110^\circ C$, Per Package	20
RMS Forward Current	$I_{F(RMS)}$	14	A
Non-Repetitive Surge Forward Current	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	$R_{\theta JC}$	1.5
Module-to-Sink			1.1
Weight			5.2
			g

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

PARAMETER	TEST CONDITIONS	SYMBOL	Min.	Typ.	Max.	UNIT
Reverse Leakage Current	$V_R=200V$	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	$I_F=1A, V_R=30V, di_F/dt=-200A/\mu s$	trr	-	18	-	ns
Reverse Recovery Time	$V_R=100V, I_F=10A$	trr	-	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	$V_R=100V, I_F=10A$	trr	-	46	-	ns
Max. Reverse Recovery Current	$di_F/dt=-200A/\mu s, T_J=125^\circ C$	I_{RRM}	-	4.8	-	A

FIG. 1 - Typical Forward Voltage Drop Characteristics

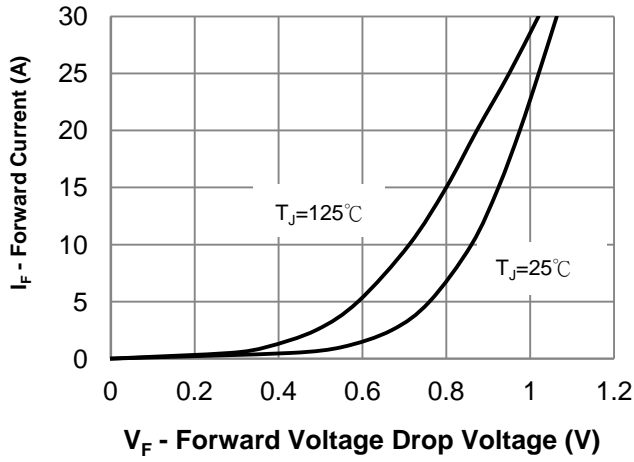


FIG. 2 - Typical Value of Reverse Current vs. Reverse Voltage

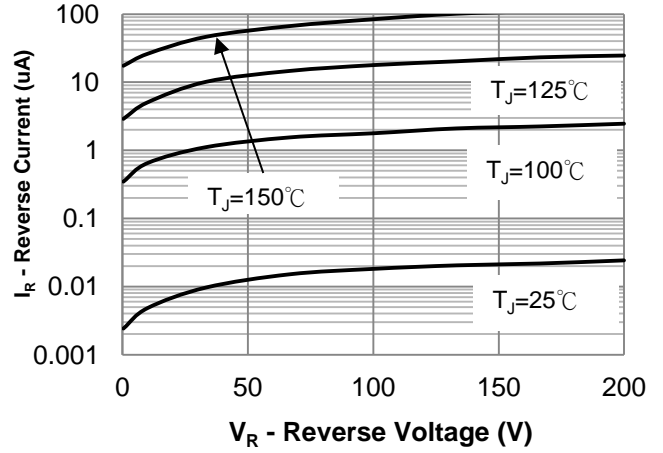


FIG. 3 - Typical Junction Capacitance vs. Reverse Voltage

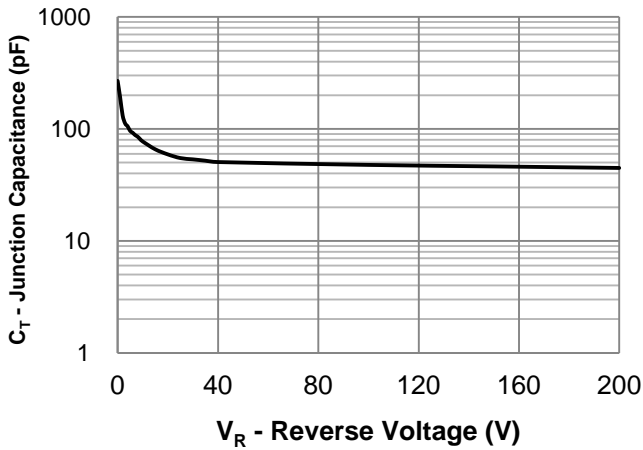


FIG. 4 - Average Forward Current vs. Maximum Allowable Case Temperature

