



Fast Recovery Epitaxial Diode

Features

- Ultrafast recovery time
- Soft recovery characteristics
- Low Forward Voltage
- High surge capacity
- Low Leakage Current

Mechanical Data

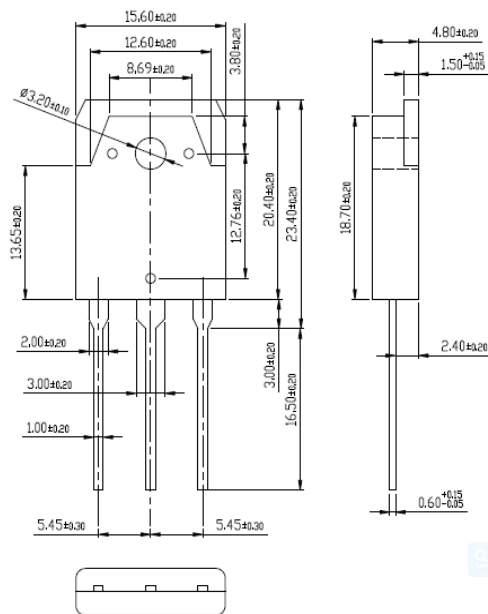
- Case: JEDEC TO-3PN molded plastic
- Polarity: As marked on the body
- Mounting position: Any

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

Applications

- Welding machine
- Power Supply
- Ultrasonic Cleaner

TO-3PN



Package Outline Dimensions in Inches (Millimeters)

RoHS
COMPLIANT

Absolute Maximum Ratings

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Test Conditions	Symbol	D92-02	Unit
Marking			D92-02	
Maximum Repetitive Reverse Voltage		V_{RM}	200	V
Average Forward Current	$T_C=110^\circ\text{C}$, per Diode	$I_{F(AV)}$	10	A
	$T_C=110^\circ\text{C}$, per Package		20	
RMS Forward Current RMS	$T_C=110^\circ\text{C}$, per Diode	$I_{F(RMS)}$	14	A
Non-Repetitive Surge Forward Current	$t_p=10\text{ms}$, 50Hz, Half Sine Wave	I_{FSM}	100	A
Power Dissipation		P_D	83	W
Operating Junction Temperature Range		T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range		T_{STG}	-55 to +150	$^\circ\text{C}$
Thermal Resistance	Junction-to-Case	$R_{\theta JC}$	1.5	$^\circ\text{C}/\text{W}$
Mounting Torque		T_{orque}	1.1	Nt. m

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse Leakage Current	$V_R=200\text{V}$	I_{RM}	-	-	25	μA
	$V_R=200\text{V}$, $T_J=125^\circ\text{C}$		-	-	250	μA
Forward Voltage	$I_F=10\text{A}$	V_F	-	0.95	1.1	V
	$I_F=10\text{A}$, $T_J=125^\circ\text{C}$		-	-	0.95	V
Reverse Recovery Time	$I_F=1\text{A}$, $V_R=30\text{V}$, $di_F/dt=-200\text{A}/\mu\text{s}$	T_{RR}	-	18	-	nS
Reverse Recovery Time	$V_R=100\text{V}$, $I_F=10\text{A}$	T_{RR}	-	34	-	ns
Max. Reverse Recovery Current	$di_F/dt=-200\text{A}/\mu\text{s}$, $T_J=25^\circ\text{C}$	I_{RRM}	-	3.2	-	A
Reverse Recovery Time	$V_R=100\text{V}$, $I_F=10\text{A}$	T_{RR}	-	46	-	ns
Max. Reverse Recovery Current	$di_F/dt=-200\text{A}/\mu\text{s}$, $T_J=125^\circ\text{C}$	I_{RRM}	-	4.8	-	A

D92-02-U-00-00

Rev. 11, 18-May-2020



Fig. 1 - Typical Forward Voltage Drop Characteristics

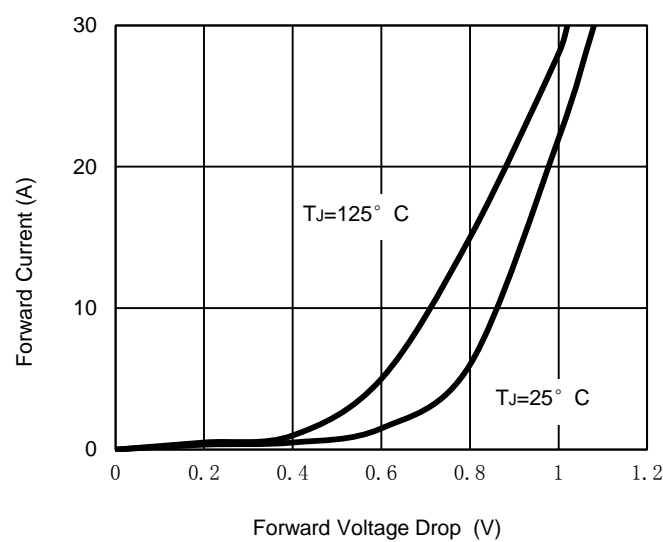


Fig. 2 - Typical Value of Reverse Characteristics

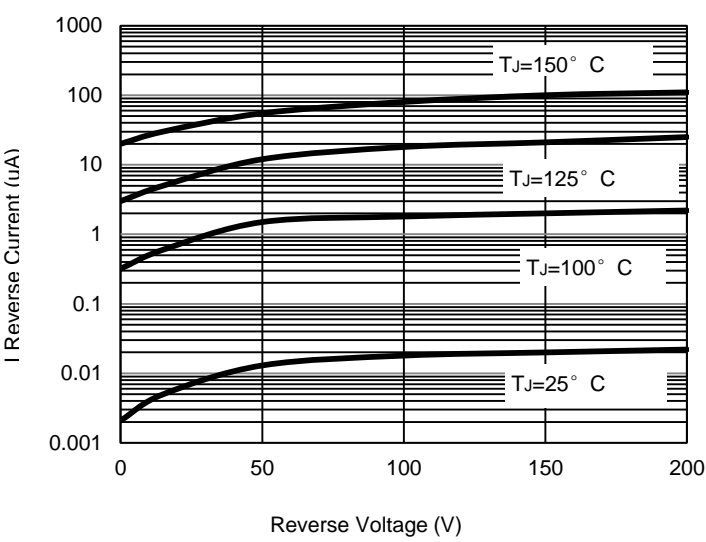


Fig. 3 - Typical Junction Capacitance

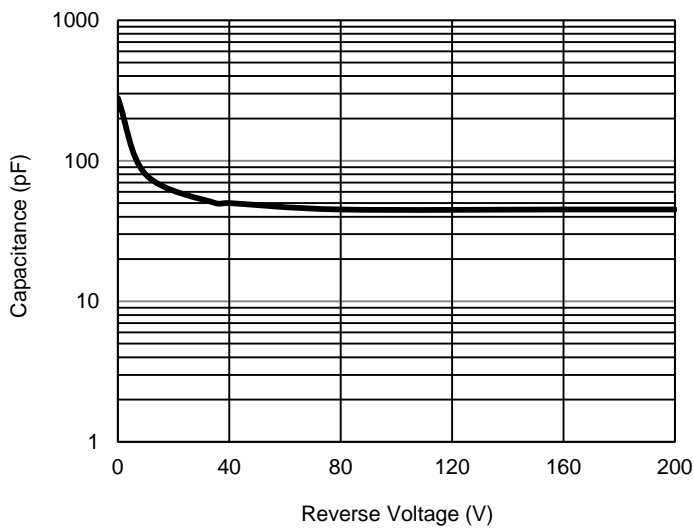
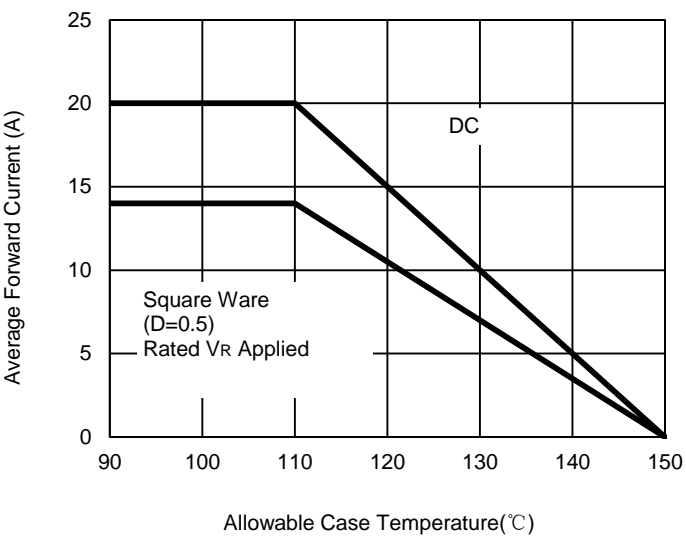


Fig. 4 - Average Forward Current Derating Curve



The curve above is for reference only.



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