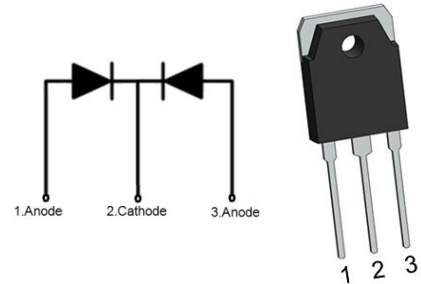


# D40H60DPC

## 600V, 30A Ultra Fast Recovery Diode

### Features

- High Voltage And High Speed Switching
- Low Forward Voltage Drop And Low Leakage Current
- TO-3P Package Offers Excellent Thermal Performance
- Pb-free Plating; RoHS Compliant



### Application

- Power Factor Correction
- Free-Wheeling Diode

### Absolute Maximum Ratings

Symbol	Parameter	Value	Unit
$V_{RRM}$	Peak repetitive reverse voltage	600	V
$I_{F(AV)}@T_C=100^\circ C$	Average Rectified Forward Current (Per device)	30	A
$I_{FSM}$	Non-repetitive Peak Surge Current	300	A
$T_J, T_{STG}$	Operating Junction and Storage Temperature	-50~150	$^\circ C$

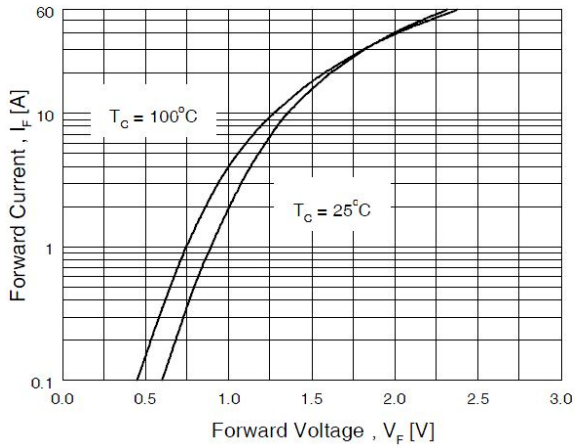
### Thermal Resistance

Symbol	Parameter	Value	Unit
$R_{\theta JC}$	Maximum Junction-to-Case thermal resistance	0.5	$^\circ C/W$
$R_{\theta JA}$	Maximum Junction-to-Ambient thermal resistance	40	$^\circ C/W$

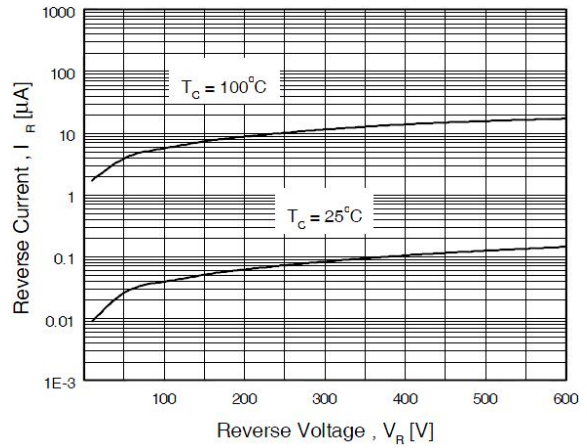
### Electrical Characteristics (Per diode, $T_J = 25^\circ C$ , Unless Otherwise Specified)

Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_F$	Diode Forward Voltage	$I_F = 15A, T_C = 25^\circ C$	-	1.3	1.6	V
		$I_F = 15A, T_C = 100^\circ C$	-	-	1.5	V
$I_R$	Reverse Leakage Current	$V_R = 600V, T_C = 25^\circ C$	-	-	50	$\mu A$
		$V_R = 600V, T_C = 100^\circ C$	-	-	200	$\mu A$
$T_{RR}$	Maximum Reverse Recovery time	$V_R = 100V, I_F = 15A$	-	-	70	nS
$I_{RR}$	Maximum Reverse Recovery Current	$di/dt = 200A/\mu s$	-	-	8	A
$Q_{RR}$	Maximum Reverse Recovery Charge	$T_C = 25^\circ C$	-	-	280	nC
$T_{RR}$	Maximum Reverse Recovery time	$V_R = 100V, I_F = 15A$	-	-	100	nS
$I_{RR}$	Maximum Reverse Recovery Current	$di/dt = 200A/\mu s$	-	-	10	A
$Q_{RR}$	Maximum Reverse Recovery Charge	$T_C = 100^\circ C$	-	-	500	nC

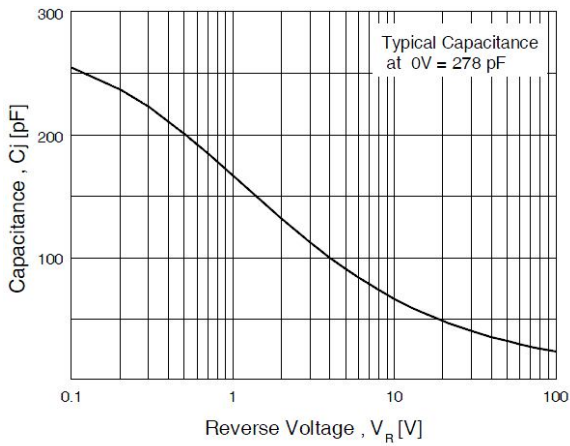
## Typical Performance Characteristics



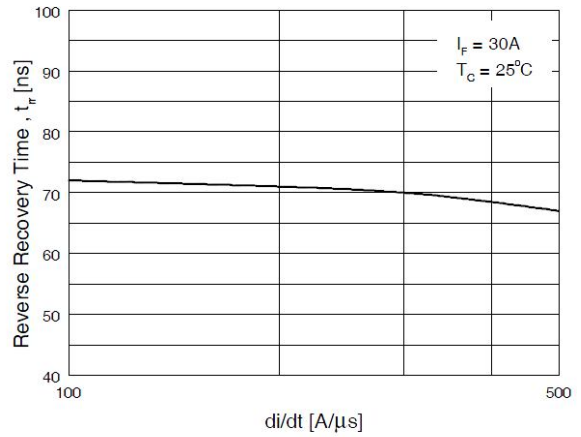
**Figure 1. Typical Forward Voltage Drop vs. Forward Current**



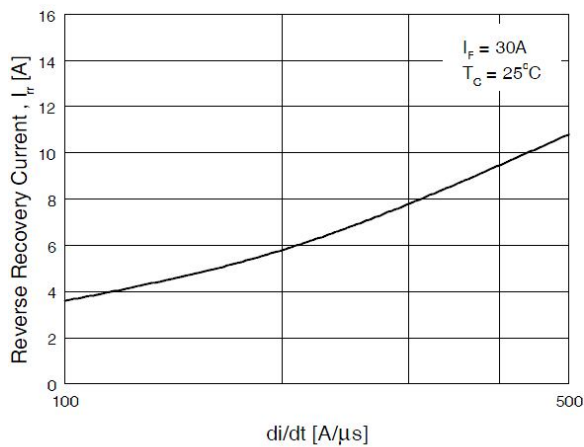
**Figure 2. Typical Reverse Current vs. Reverse Voltage**



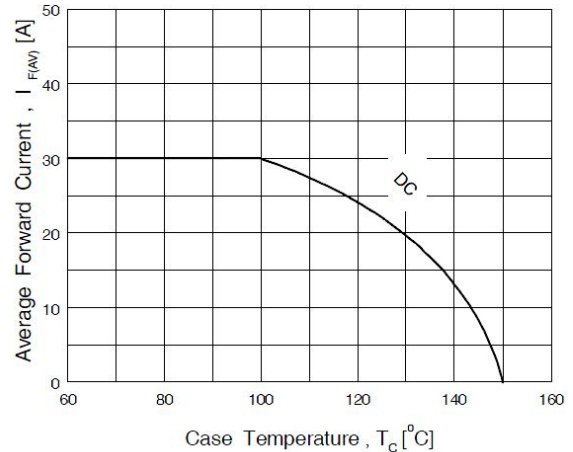
**Figure 3. Typical Junction Capacitance**



**Figure 4. Typical Reverse Recovery Time vs. di/dt**



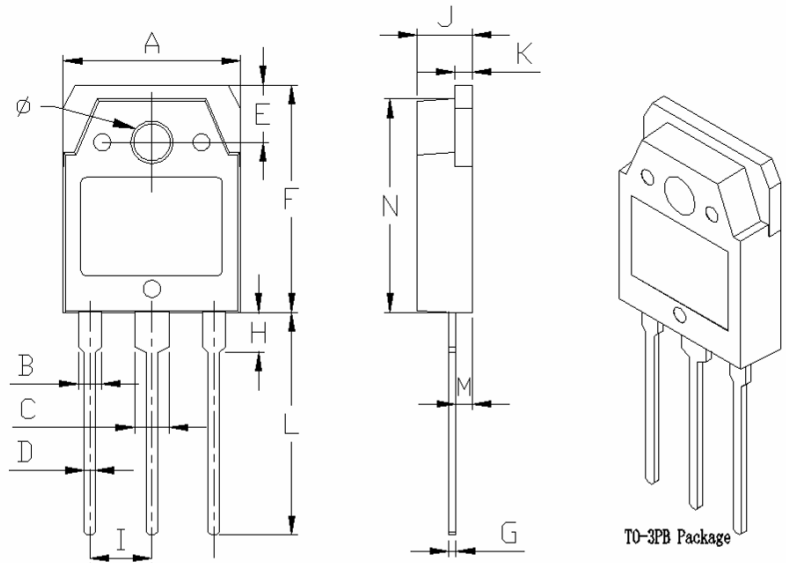
**Figure 5. Typical Reverse Recovery Current vs. di/dt**



**Figure 6. Forward Current Derating Curve**

## Mechanical Dimensions

Dim	Millimeters	
	MIN.	MAX.
A	15.50	15.70
B	1.90	2.10
C	2.90	3.10
D	0.90	1.10
E	4.90	5.10
F	19.80	20.00
G	0.55	0.65
H	3.40	3.60
I	5.45 BSC.	
J	4.70	4.9
K	1.45	1.55
L	19.9	20.10
M	1.35	1.5
N	18.6	18.8
∅	3.20	3.40



## Attention

- Specifications of any and all SPE products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- Any and all Invsemi products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with us described or contained herein in such applications.
- Invsemi assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all Silikron products described or contained herein.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc.
- We hereby disclaim any and all warranties, including but not limited to warranties of non-infringement, regarding circuits, descriptions and charts stated herein.