



# H30D05C – H30D60C



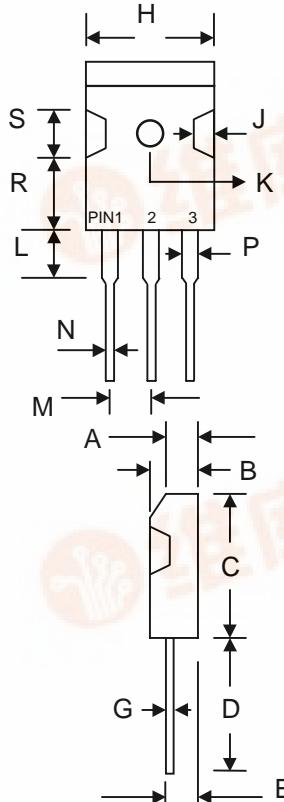
30A GLASS PASSIVATED DUAL ULTRAFAST RECTIFIER

## Features

- Glass Passivated Die Construction
- Ultra-Fast Switching
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

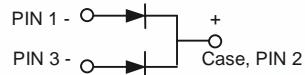
## Mechanical Data

- Case: TO-3P, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: See Diagram
- Weight: 5.6 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 11.5 cm-kg (10 in-lbs) Max.
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



TO-3P		
Dim	Min	Max
A	3.20	3.50
B	4.70	5.30
C	—	23.00
D	19.00	—
E	2.80	3.20
G	0.45	0.85
H	—	16.20
J	1.70	2.70
K	3.15 Ø	3.65 Ø
L	—	4.50
M	5.25	5.65
N	1.10	1.40
P	—	2.50
R	11.70	12.70
S	5.00	6.00

All Dimensions in mm



## Maximum Ratings and Electrical Characteristics

$\text{@ } T_A = 25^\circ\text{C}$  unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	H30D 05C	H30D 10C	H30D 15C	H30D 20C	H30D 30C	H30D 40C	H30D 50C	H30D 60C	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$									
Working Peak Reverse Voltage	$V_{RWM}$	50	100	150	200	300	400	500	600	V
DC Blocking Voltage	$V_R$									
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	210	280	350	420	V
Average Rectified Output Current $\text{@ } T_C = 100^\circ\text{C}$	$I_O$					30				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$					300				A
Forward Voltage $\text{@ } I_F = 15\text{A}$	$V_{FM}$		1.0		1.3		1.7			V
Peak Reverse Current $\text{@ } T_A = 25^\circ\text{C}$ $\text{@ } T_A = 125^\circ\text{C}$	$I_{RM}$				10					$\mu\text{A}$
					500					
Reverse Recovery Time (Note 1)	$t_{rr}$		50		75		100			nS
Typical Junction Capacitance (Note 2)	$C_J$		175		145					pF
Operating and Storage Temperature Range	$T_J, T_{STG}$				-55 to +150					$^\circ\text{C}$

Note 1: Measured with  $IF = 0.5\text{A}$ ,  $IR = 1.0\text{A}$ ,  $IRR = 0.25\text{A}$ . See figure 5.

Note 2: Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



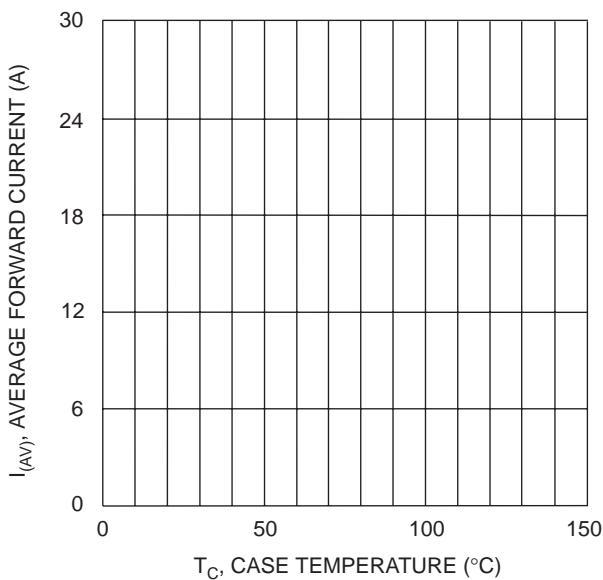


Fig. 1 Forward Current Derating Curve

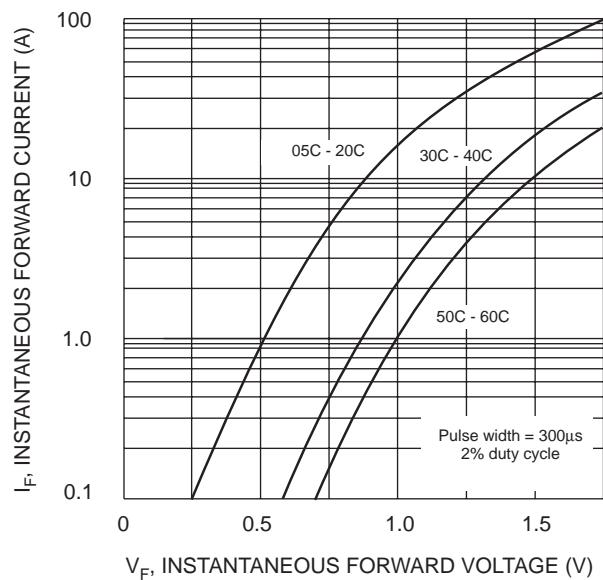


Fig. 2 Typical Forward Characteristics

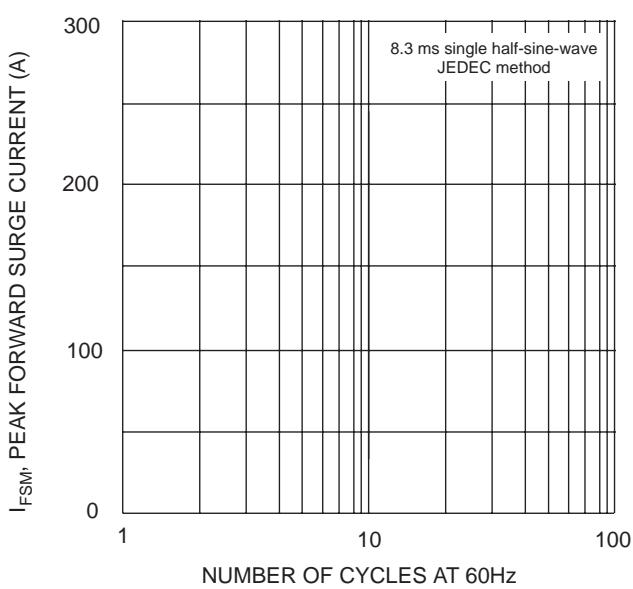


Fig. 3 Maximum Non-Repetitive Surge Current

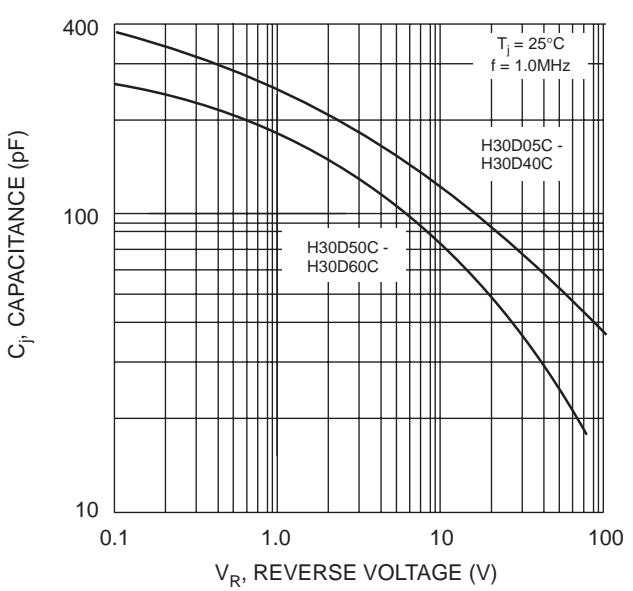
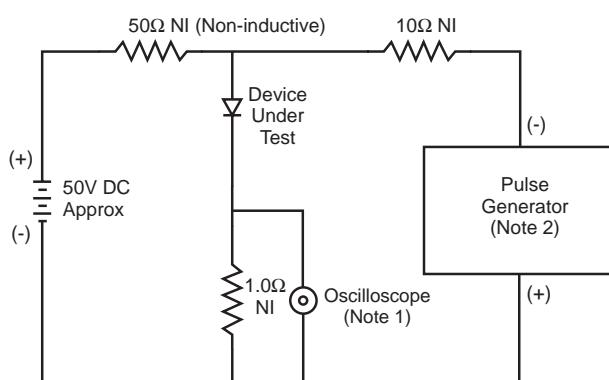


Fig. 4 Typical Junction Capacitance



Notes:

1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.

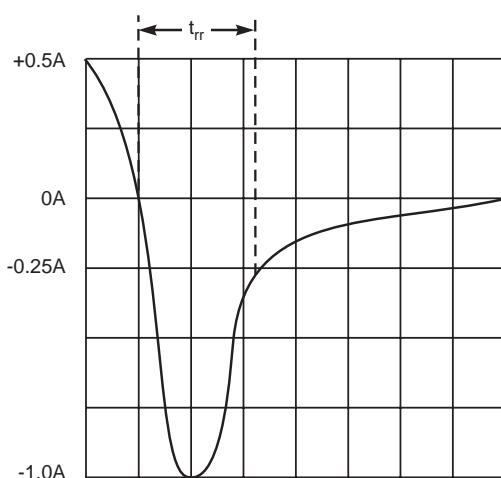
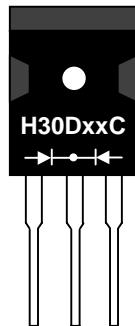


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## MARKING INFORMATION



H30DxxC = Device Number  
xx = 05, 10, 15, 20, 30, 40, 50 or 60  
Polarity = As Marked on Body

## PACKAGING INFORMATION

### BULK

Tube Size L x W x H (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
505 x 46 x 6.5	30	520 x 145 x 95	1,200	540 x 306 x 115	2,400	18.0

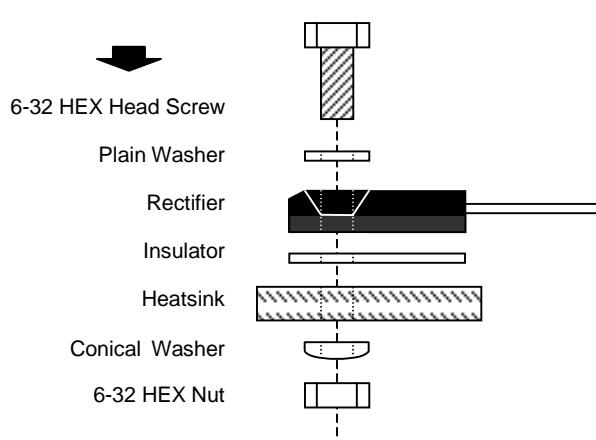
**Note:** 1. Anti-static tube, water clear color.

## RECOMMENDED SCREW MOUNTING ARRANGEMENT

Recommended isolated mounting when screw is at heatsink potential. 6-32 hardware is used.

A conical washer should be used to apply proper force to the device. Screw should not be tightened with any type of air-forced torque or equipment that may cause high impact on device package.

The interface should apply a layer of thermal grease or a highly conductive thermal pad for better heat dissipation.



## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
H30D05C	TO-3P	30 Units/Tube
H30D10C	TO-3P	30 Units/Tube
H30D15C	TO-3P	30 Units/Tube
H30D20C	TO-3P	30 Units/Tube
H30D30C	TO-3P	30 Units/Tube
H30D40C	TO-3P	30 Units/Tube
H30D50C	TO-3P	30 Units/Tube
H30D60C	TO-3P	30 Units/Tube

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add “-LF” suffix to part number above. For example, H30D05C-LF.**

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