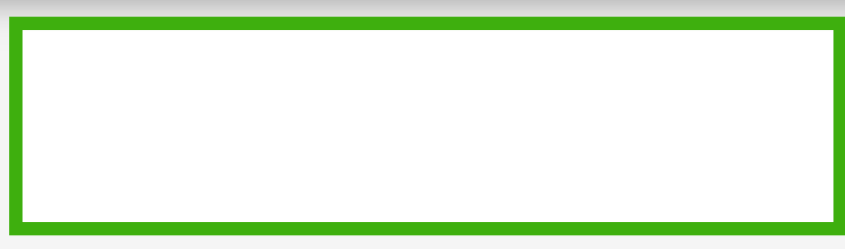
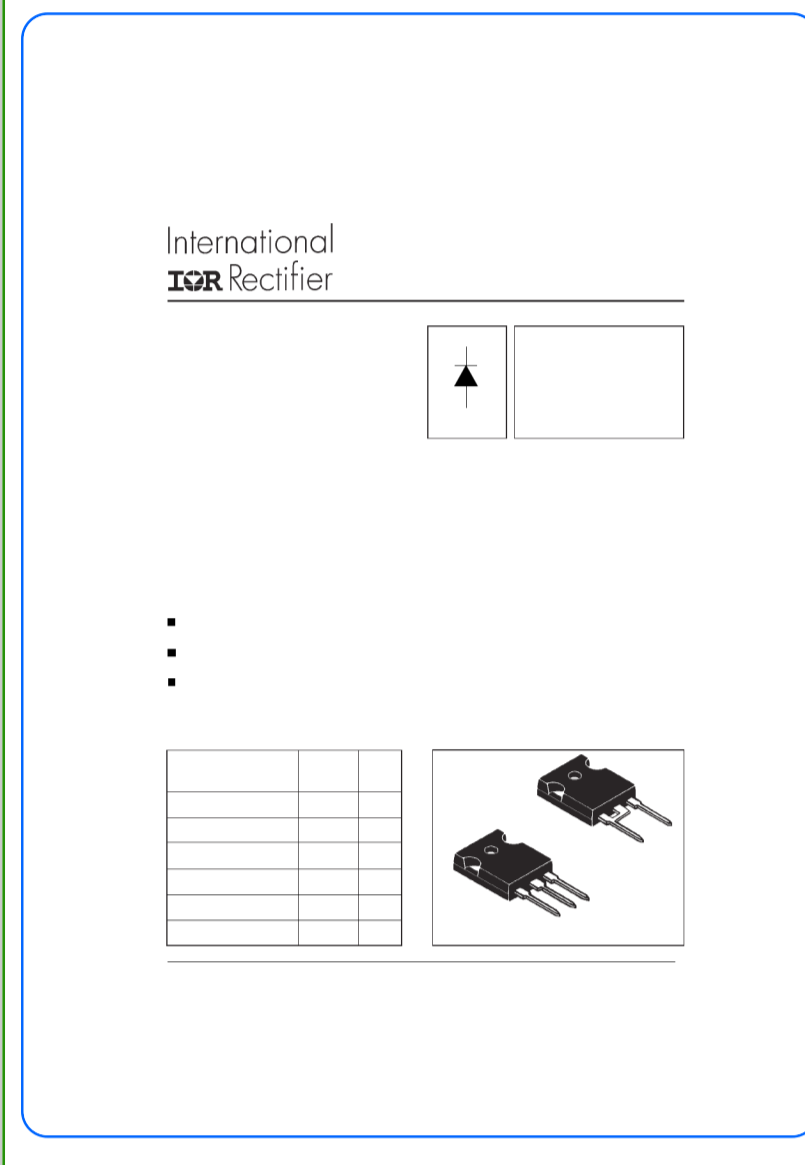


DIODE. 30EPF12PbF Datasheet



SEARCH

30EPF12PbF Datasheet PDF



Part	30EPF12PbF
Description	FAST SOFT RECOVERY RECTIFIER DIODE
Feature	Bulletin I2170 10/04 QUIETIR Series 30EPF12PbF, 30CPF12PbF FAST SOFT RECOVERY RECTIFIER DIODE Lead.
Manufacture	International Rectifier
Datasheet	Download 30EPF12PbF Datasheet

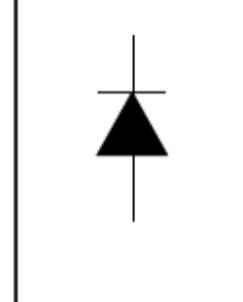
International Rectifier	Bulletin I2170 10/04 QUIETIR Series 30EPF12PbF, 30CPF12PbF	30EPF12PbF Datasheet
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Bulletin I2170 10/04



QUIETIR Series
30EPF12PbF, 30CPF12PbF

FAST SOFT RECOVERY RECTIFIER DIODE
Lead-Free ("PbF" suffix)



$V_F < 1.41V @ 30A$
 $t_{rr} = 95 ns$
 $V_{RRM} = 1200V$

Description/ Features

The 30EPF12PbF & 30CPF12PbF soft recovery QUIETIR rectifier series has been optimized for combined short reverse recovery time and low forward voltage drop.
The glass passivation ensures stable reliable operation in the most severe temperature and power cycling conditions.

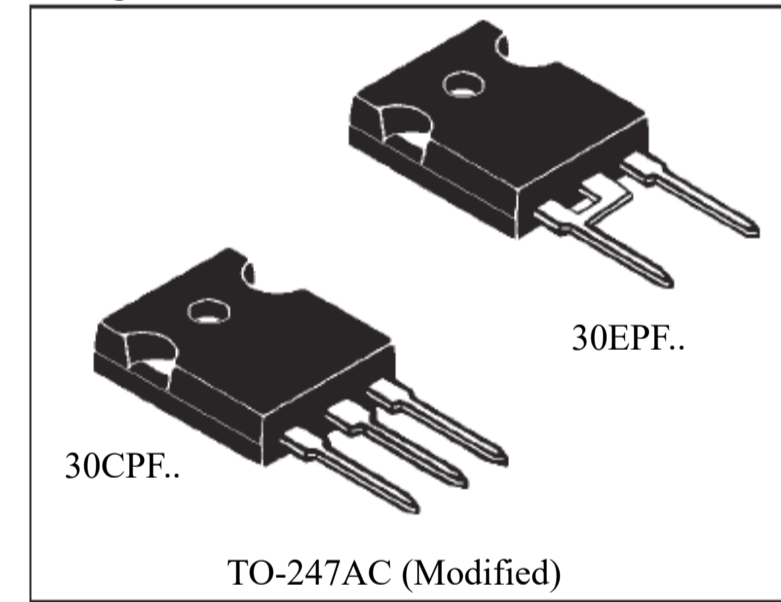
Typical applications are:

- Output rectification and freewheeling in inverters, choppers and converters
- and input rectifications where severe restrictions on conducted EMI should be met.
- 30CPF series is a drop in replacement for 25CPF Series (parallel connection only)

Major Ratings and Characteristics

Characteristics	Values	Units
$I_{F(AV)}$ Sinusoidal waveform	30	A
V_{RRM}	1200	V
I_{FSM}	350	A
$V_F @ 30A, T_J = 25^\circ C$	1.41	V
$t_{rr} @ 1A, 100A/\mu s$	95	ns
T_J	-40 to 150	$^\circ C$

Package Outline



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1

30EPF12PbF, 30CPF12PbF QUIETIR Series
Bulletin I2170 10/04



Voltage Ratings

Part Number	V_{RRM} , maximum peak reverse voltage V	V_{RSM} , maximum non repetitive peak reverse voltage V	I_{RRM} 150 $^\circ C$ mA
30EPF12PbF, 30CPF12PbF	1200	1300	6

Absolute Maximum Ratings

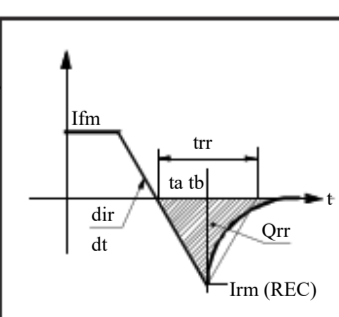
Parameters	30.PF.	Units	Conditions
$I_{F(AV)}$ Max. Average Forward Current	30	A	@ $T_C = 95^\circ C$, 180 $^\circ$ conduction half sine wave
I_{FSM} Max. Peak One Cycle Non-Repetitive Surge Current	300	A	10ms Sine pulse, rated V_F applied
	350		10ms Sine pulse, no voltage reappplied
$I_{t Max.}$ I_t for fusing	450	$A^2 s$	10ms Sine pulse, rated V_F applied
	636		10ms Sine pulse, no voltage reappplied
$I_{t Max.}^2$ $I_{t Max.}^2$ for fusing	6360	A^2 / s	$t = 0.1$ to 10ms, no voltage reappplied

Electrical Specifications

Parameters	30.PF.	Units	Conditions
V_{FM} Max. Forward Voltage Drop	1.41	V	@ 30A, $T_J = 25^\circ C$
r_F Forward slope resistance	10.09	m Ω	$T_J = 150^\circ C$
V_{TH} Threshold voltage	0.992	V	
I_{RM} Max. Reverse Leakage Current	0.1	mA	$T_J = 25^\circ C$
	6		$T_J = 150^\circ C$

Typical Recovery Characteristics

Parameters	30.PF.	Units	Conditions
t_{rr} Reverse Recovery Time	450	ns	@ 30Apk
I_{rr} Reverse Recovery Current	6.1	A	@ 25A/ μs
Q Reverse Recovery Charge	2.16	μC	@ 25 $^\circ C$
S Snap Factor	tb/ta	0.6	typical



2 www.irf.com