POSEICO SPA
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FAST RECOVERY DIODE
INSULATED MODULE

*Full ermetic packaging
*Industrial compatible packaging
*Insulation using Aln substrate
*6KVrms insulation voltage available on request
*Contact screws avaliable on request

AFF350A

Repetitive voltage up to	**4500 V**
Mean on-state current	**356 A**
Surge current	**9 kA**

FINAL SPECIFICATION

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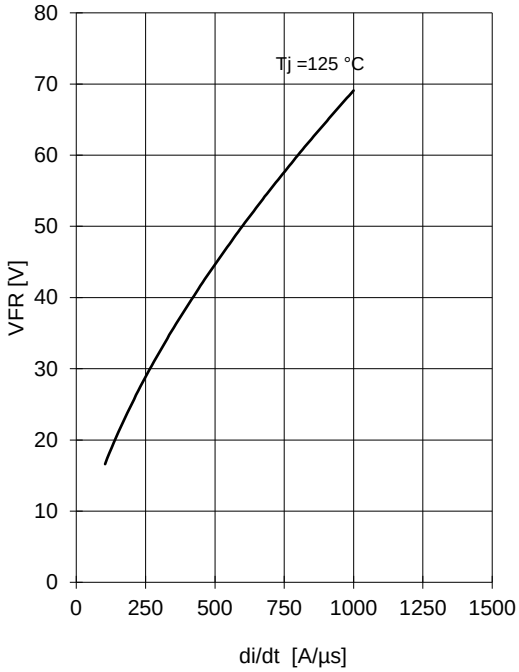
Symbol	Characteristic	Conditions	Tj [°C]	Value	Unit
	BLOCKING				
V_{RRM}	Repetitive peak reverse voltage		125	4500	V
V_{RSM}	Non-repetitive peak reverse voltage		125	4600	V
I_{RRM}	Repetitive peak reverse current		125	50	mA
	CONDUCTING				
$I_{F(AV)}$	Mean on-state current	180° sin, 50Hz, Tc=55°C		356,2	A
$I_{F(AV)}$	Mean on-state current	180° sin. 50Hz, Tc=70°C		295,6	A
I_{FSM}	Surge on-state current	sine wave, 10 ms	125	9,0	kA
I^2t	I^2t	without reverse voltage		405 x1E3	A^2s
V_F	On-state voltage	On-state current = 1000 A	125	4,1	V
$V_{F(TO)}$	Threshold voltage		125	2,70	V
r_F	On-state slope resistance		125	1,400	mohm
Q_{rr}	Reverse recovery charge	I F = 1000 A	125	1150	µC
I_{rr}	Peak reverse recovery current	di/dt= 1000 A/µs	125	900	A
t_{rr}	Reverse recovery time	VR = 1800 V	125		µs
V_{FR}	Peak forward recovery	400 A/µs	125	38	V
	MOUNTING				
$R_{th(j-c)}$	Thermal impedance	Junction to case, per element		50	°C/kW
$R_{th(c-h)}$	Thermal impedance	Case to heatsink, per element		20	°C/kW
T_j	Operating junction temperature			-30 / 125	°C
V_{ins}	RMS insulation voltage	50Hz, circuit to base,all terminal shorted	25	4500	V
T	Mounting tourque	Case to heatsink		4 to 6	Nm
		Busbars to terminals		12 to 18	Nm
	Mass			1500	g

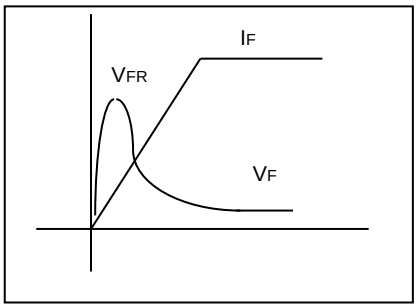
ORDERING INFORMATION : AFF350A S 45
standard specification — VRRM/100

(*) 6000V available on request.
Add HVI to the desired code in phase of order, i.e. AFF230HVIS26

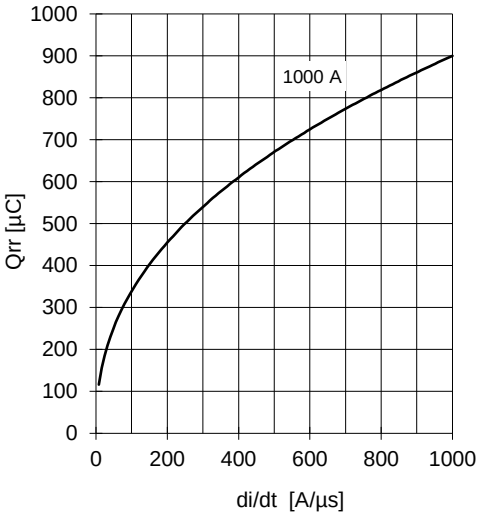
SWITCHING CHARACTERISTICS

FORWARD RECOVERY VOLTAGE

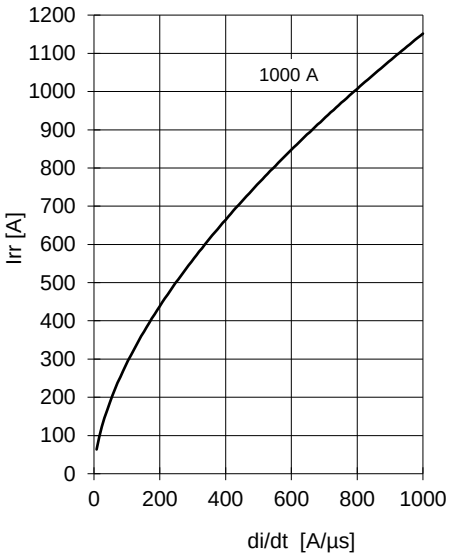




REVERSE RECOVERY CHARGE
Tj = 125 °C



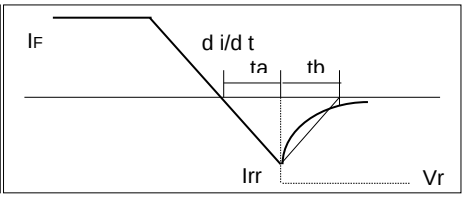
REVERSE RECOVERY CURRENT
Tj = 125 °C



ta = Irr / (di/dt) tb = trr - ta

Softness (s factor) s = tb / ta

Energy dissipation during recovery Er = Vr · (Qrr - Irr ·ta / 2)

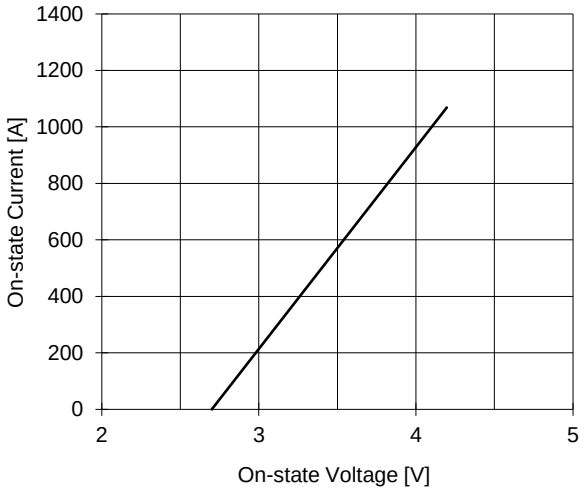


AFF350A FAST RECOVERY DIODE

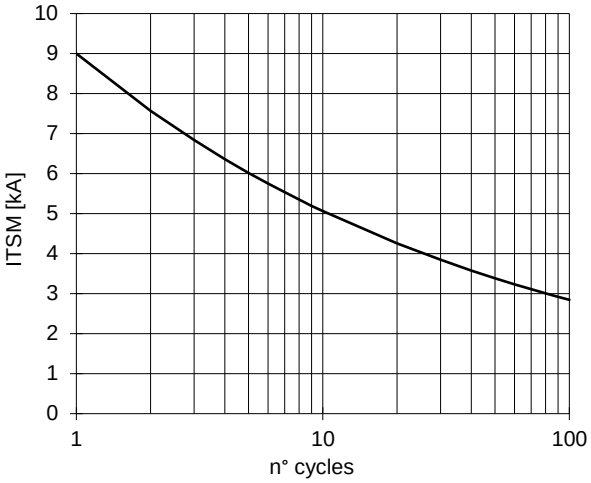
POSEICO POWER ELECTRONICS

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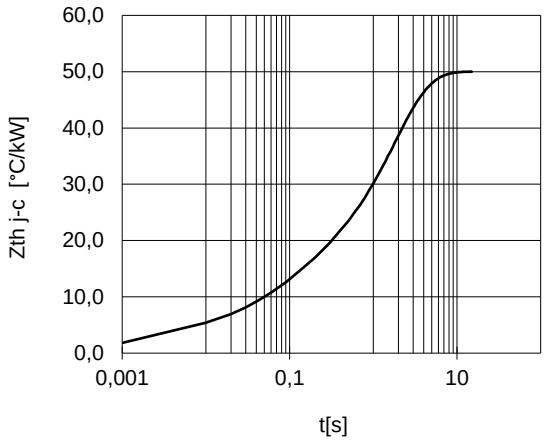
ON-STATE CHARACTERISTIC
Tj = 125 °C

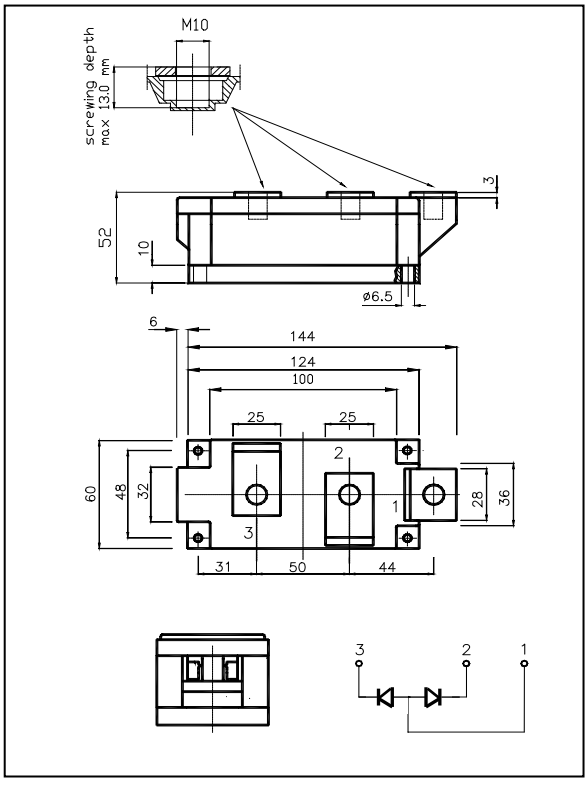


SURGE CHARACTERISTIC
Tj = 125 °C



TRANSIENT THERMAL IMPEDANCE





All the characteristics given in this data sheet are guaranteed only with uniform clamping force, cleaned and lubricated heatsink, surfaces with flatness < .03 mm and roughness < 2 µm.
In the interest of product improvement POSEICO SPA reserves the right to change any data given in this data sheet at any time without previous notice.
If not stated otherwise the maximum value of ratings (simbols over shaded background) and characteristics is reported.

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