

FAST RECOVERY RECTIFIER DIODES

 VERY FAST FORWARD AND REVERSE RECOVERY DIODES

F 126 (Plastic)

SUITABLE APPLICATION

- SWTCHING POWER TRANSISTORS DRIVER CIRCUITS (SERIES DIODES IN ANTISATURATION CLAMP SPEED UP DIODE IN DISCRETE DARLINGTON...)
- THYRISTORS GATE DRIVER CIRCUITS
- HIGH FREQUENCY RECTIFICATION

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	Value	Unit		
I _{FRM}	Repetive Peak Forward Current	$t_p \le 20 \mu s$	20	Α	
I _{F (AV)}	Average Forward Current*	$T_a = 25^{\circ}C$ $\delta = 0.5$	1	А	
I _{FSM}	Surge non Repetitive Forward Current	t _p = 10ms Sinusoidal	20	А	
P _{tot}	Power Dissipation*	1.7	W		
T _{stg} T _j	Storage and Junction Temperature Range	- 40 to 125	°C		
TL	Maximum Lead Temperature for Soldering during 10s at 4mm from Case 230				

Symbol	Parameter	PLQ 08	PLQ 1	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	80	100	V
V_{RSM}	Non Repetitive Peak Reverse Voltage	80	100	V

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
R _{th (j - a)}	Junction-ambient*	60	°C/W

^{*} On infinite heatsink with 10mm lead length.

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ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Synbol		Min.	Тур.	Max.	Unit	
I _R	T _j = 25°C	$V_R = V_{RRM}$			10	μΑ
	T _j = 100°C				0.5	mA
VF	T _j = 25°C	I _F = 1A			1.1	V

RECOVERY CHARACTERISTICS

Symbol		Test Conditions	Min.	Тур.	Max.	Unit	
t _{rr}	$T_{j} = 25^{\circ}C$ $V_{R} = 30V$	I _F = 1A See figure 12	di _F /dt = - 50A/μs			50	ns
t _{fr}	T _j = 25°C Measured at 1.1 x V _F	I _F = 1A	$t_r = 20$ ns			50	ns

Figure 1. Power losses versus average current.

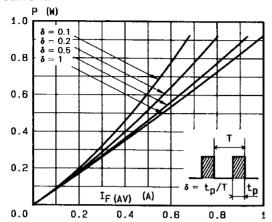


Figure 3. Non repetitive surge peak current versus number of cycles.

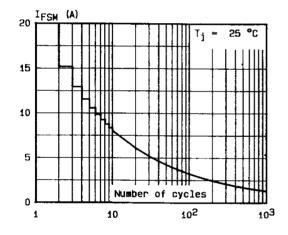


Figure 5. Voltage drop versus forward current.

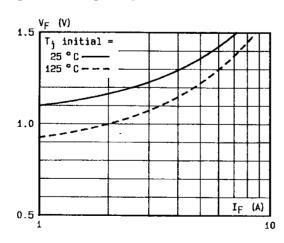


Figure 2. Allowable DC current versus ambient temperature.

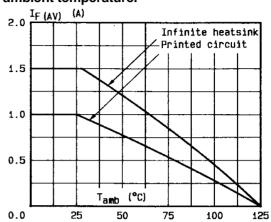


Figure 4. Transient thermal impedance junction-ambient. Printed circuit versus pulse duration (L = 10 mm).

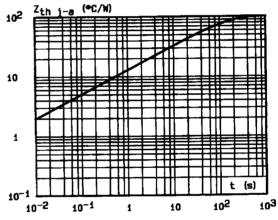


Figure 6. Voltage drop versus forward current.

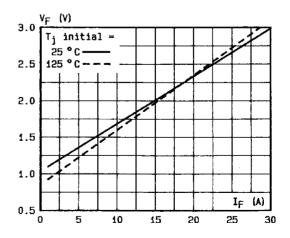


Figure 7. Capacitance versus reverse voltage applied.

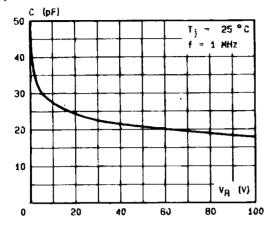


Figure 8. Thermal resistance junction-ambient versus lead length.

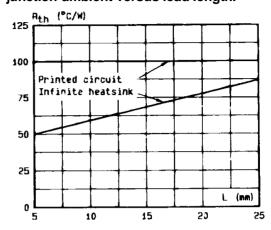


Figure 9. Recovery time versus di_F/dt.

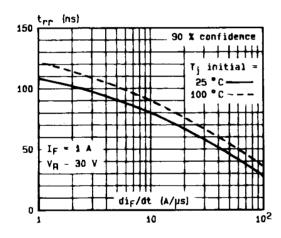


Figure 10. Peak reverse current versus di_F/dt.

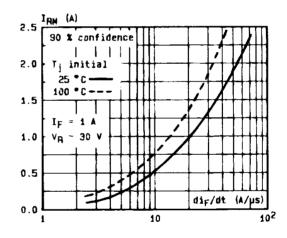


Figure 11. Dynamic parameters versus junction temperature.

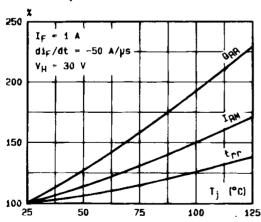
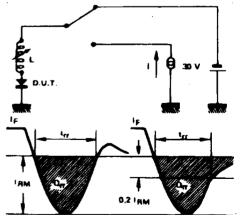
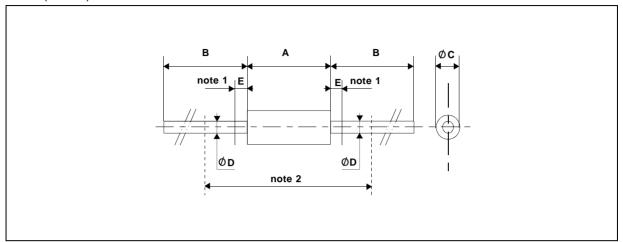


Figure 12. Measurement of t_{rr} (fig. 8) and I_{RM} (fig. 10).



PACKAGE MECHANICAL DATA

F 126 (Plastic)



	DIMENSIONS				NOTES	
REF.	REF. Millimeters		Inches			
	Min.	Max.	Min.	Max.		
Α	6.05	6.35	0.238	0.250	1 - The lead diameter Ø D is not controlled over zone E	
В	26		1.024			
ØC	2.95	3.05	0.116	0.120	2 - The minimum axial lengh within which the device may be placed with its leads bent at right angles is 0.59"(15 mm)	
ØD	0.76	0.86	0.029	0.034	praced with its leads bent at right angles is 0.59 (15 min)	
Е		1.27		0.050		

Cooling method: by convection (method A) Marking: type number Weight: 0.4g

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