



Surface Mount Super Fast Recovery Rectifier

Voltage 200 V Current 2 A

Features

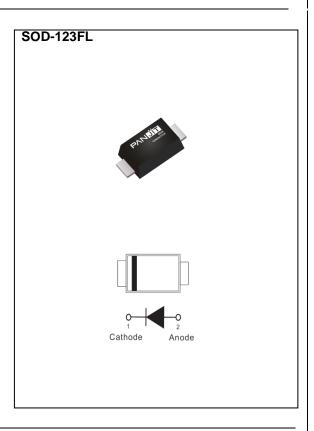
- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Low leakage
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

• Case: SOD-123FL Package

• Terminals : Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.0173 grams



Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS	
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	200	V
Maximum RMS Voltage	V _{RMS}	140	V	
Maximum DC Blocking Voltage	V _{DC}	200	V	
Maximum Average Forward Current		I _{F(AV)}	2	Α
Peak Forward Surge Current: 8.3 ms Single Half Sine- Wave Superimposed On Rated Load		I _{FSM}	60	Α
Typical Junction Capacitance Measured at 1 MHZ And Applied $V_R = 4 \text{ V}$		CJ	25	pF
Typical Thermal Resistance	(Note 1)	$R_{\theta JA}$	200	
	(Note 2)	R _{θJC}	36	°C/W
	(Note 2)	R _{0JL}	33	
Operating Junction Temperature Range		TJ	-55~175	°C
Storage Temperature Range		T _{STG}	-55~175	°C





Electrical Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS	
Forward Voltage	VF	I _F = 1 A, T _J = 25 °C	1	0.83	-	V	
		I _F = 2 A, T _J = 25 °C	ı	-	0.95	V	
		I _F = 1 A, T _J = 125 °C	-	0.7	-	V	
		I _F = 2 A, T _J = 125 °C	-	0.78	-	V	
Reverse Current	I _R	V _R = 160 V, T _J = 25 °C	-	5	-	nA	
		V _R = 200 V, T _J = 25 °C	-	-	1		
		V _R = 200 V, T _J = 125 °C	1	-	40	uA	
Reverse Recovery Time	T_RR	I _F = 0.5 A, I _R = 1 A, I _{RR} = 0.25 A, T _J = 25 °C	-	-	35	ns	
Reverse Recovery Time	T _{RR}	$I_F = 2 \text{ A}, V_R = 200 \text{ V}$	-	17	-	ns	
Peak Recovery Current	I _{RRM}	di/dt = 300 A/uS	-	3.9	-	Α	
Reverse Recovery Charge	Q _{RR}	T _J = 25 °C	-	39	-	nC	
Reverse Recovery Time	T _{RR}	I _F = 2 A, V _R = 200 V	-	26	-	ns	
Peak Recovery Current	I _{RRM}	di/dt = 300A/uS	-	5.6	-	Α	
Reverse Recovery Charge	Q_{RR}	T _J = 125 °C	-	83	-	nC	

NOTES:

- 1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
- 2. Mounted on a FR4 PCB, single-sided copper, with 100 cm² copper pad area.





TYPICAL CHARACTERISTIC CURVES

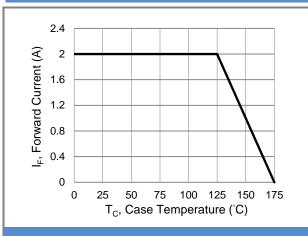


Fig.1 Forward Current Derating Curve

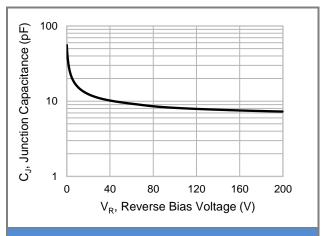


Fig.2 Typical Junction Capacitance

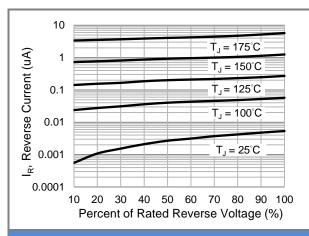


Fig.3 Typical Reverse Characteristics

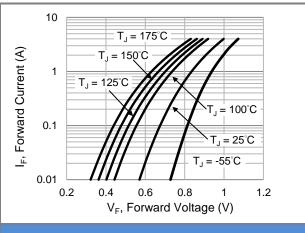


Fig.4 Typical Forward Characteristics

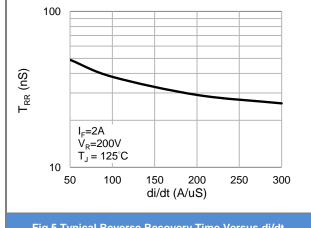


Fig.5 Typical Reverse Recovery Time Versus di/dt

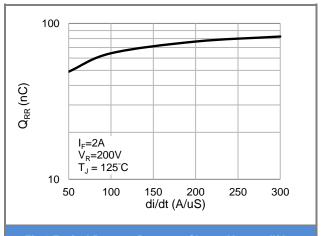


Fig.6 Typical Reverse Recovery Charge Versus di/dt

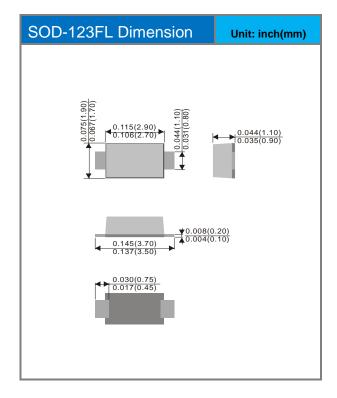


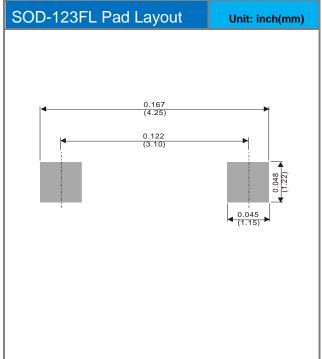


Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
MER2DAL-AU_R1_007A1	SOD-123FL	3K / 7" Reel	M2D	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout









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