

SF1040R-HAF

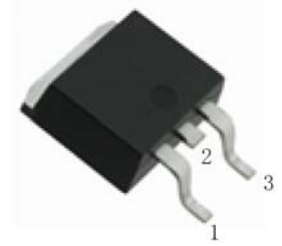
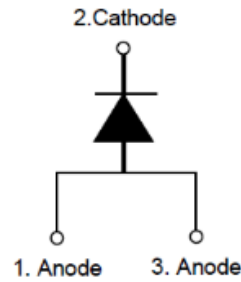
Ultrafast Recovery Rectifier

Reverse Voltage - 400 V

Forward Current - 10 A

Features

- Low forward drop voltage
- Ultrafast recovery time and high speed switching
- Halogen and Antimony Free(HAF), RoHS compliant



TO-252 Plastic Package
1. Anode 2. Cathode 3. Anode

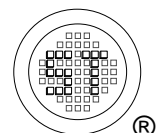
Maximum Ratings and Electrical Characteristics

Ratings at 25 °C operating temperature range applies unless otherwise specified.

Parameter	Symbols	Value	Units
Recurrent Peak Reverse Voltage	V_{RRM}	400	V
Maximum Peak Reverse Voltage	V_{RWM}	400	V
DC Blocking Voltage	V_R	400	V
Average Forward Rectified Current	$I_{F(AV)}$	10	A
Peak Forward Surge Current 8.3 ms Single Half-sine-wave Superimposed on Rated Load	I_{FSM}	120	A
Operating Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 45 to + 150	°C

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	400	-	-	V
Forward Voltage at $I_F = 10 \text{ A}$	V_F	-	-	1.4	V
Reverse Current at Rated DC Blocking Voltage $T_j = 25^\circ\text{C}$ $T_j = 125^\circ\text{C}$	I_R	-	-	5 200	μA
Typical Junction Capacitance at $V_R = 10 \text{ V}$, $f = 1 \text{ MHz}$	C_J	-	40	-	pF
Reverse Recovery Time at $I_F = 1 \text{ A}$, $di/dt = 100 \text{ A} / \mu\text{s}$	t_{rr}	-	-	25	ns



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Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

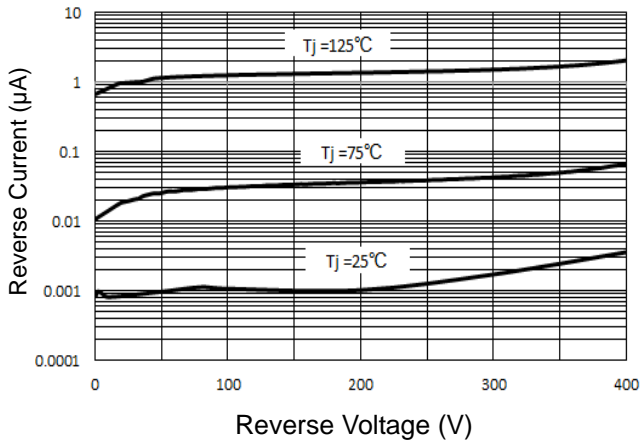


Fig 2. Forward Characteristics Curve

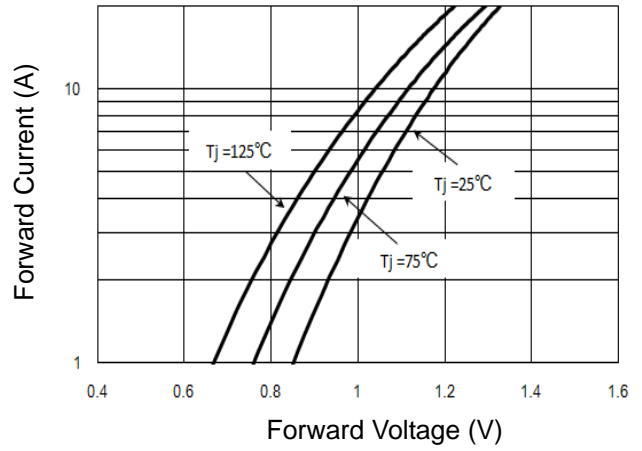


Fig 3. Average Rectified Current Derating Curve

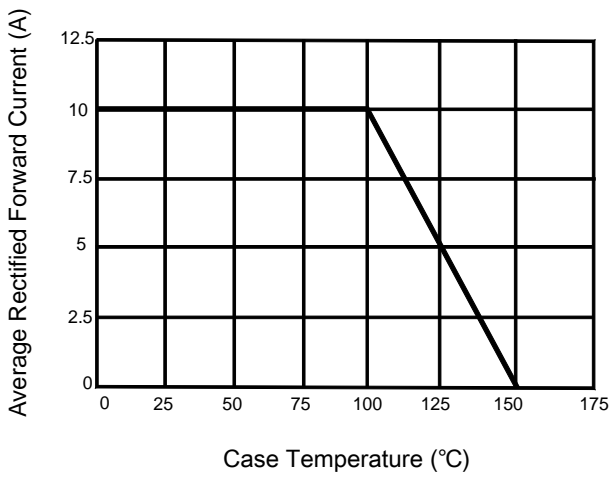
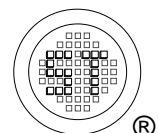
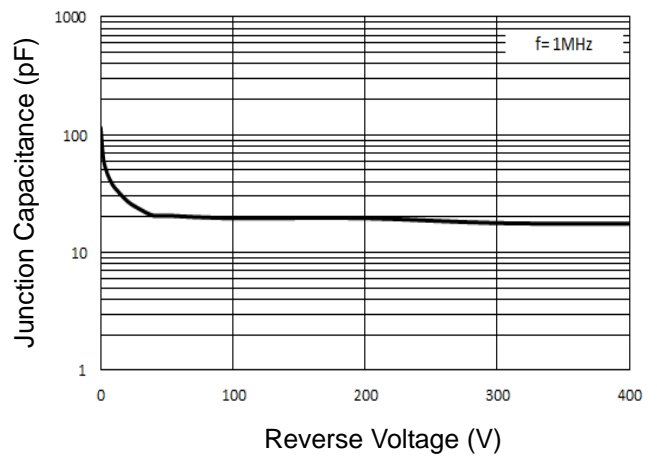


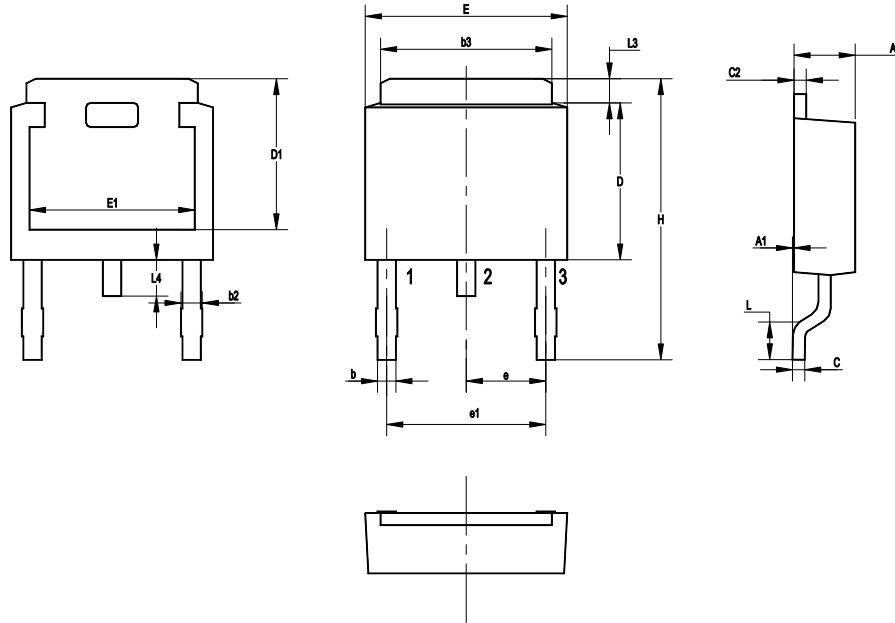
Fig 4. Junction Capacitance



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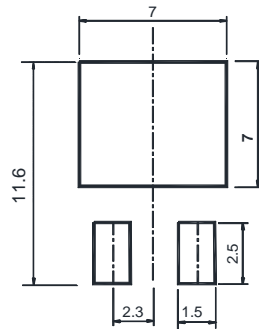
Package Outline Dimensions (Units: mm)

TO-252



UNIT	A	A1	b	b2	b3	C	C2	D	D1	E	E1	e	e1	H	L	L3	L4
mm	2.5	0.15	1.0	1.15	5.5	0.65	0.65	6.2	5.4	6.7	5.0	2.30	4.60	10.7	1.78	1.20	1.10
	2.1	0	0.5	0.65	4.9	0.4	0.4	5.6	5.0	6.1	4.6	TYP.	TYP.	9	1.40	0.85	0.51

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
TO-252	16	8 ± 0.1	0.315 ± 0.004	330	13	2,500

Marking information

" SF1040R " = Part No.

" ***** " = Date Code Marking

Font type: Arial

