

SF10A400H

Ultrafast Recovery Rectifier

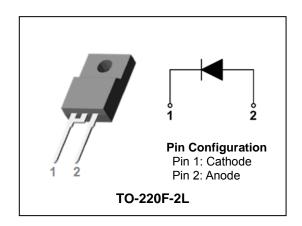
400V, 10A ULTRAFAST RECOVERY RECTIFIERS

Features

- · High voltage and high reliability
- Ultrafast reverse recovery time
- · High speed switching
- Low power loss and High efficiency
- Full lead (Pb)-free and RoHS compliant device

Applications

- · General purpose
- Switching mode power supply
- Free-wheeling diode for motor application
- · Power switching circuits
- DC-DC converter systems



Product Characteristics

I _{F(AV)}	10A
V_{RRM}	400V
V _{FM} at 125℃	1.25V
t _{rr}	30ns

Description

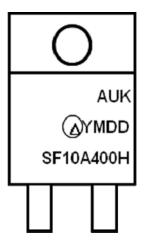
The SF10A400H is ideally as boost diode in discontinuous or critical mode power factor corrections.

The device is also intended for use as a freewheeling diode in power supplies and other power switching applications.

Ordering Information

Device	Marking Code	Package	Packaging
SF10A400H	SF10A400H	TO-220F-2L	Tube

Marking Information



AUK = Manufacture Logo

 Δ = Control Code of Manufacture

YMDD = Date Code Marking

-. Y = Year Code

-. M = Monthly Code

-. DD = Daily Code

SF10A400H = Specific Device Code

Absolute Maximum Ratings (Limiting Values)

Characteristic	Symbol	Value	Unit
Maximum repetitive reverse voltage Maximum working peak reverse voltage Maximum DC blocking voltage	$egin{array}{c} egin{array}{c} egin{array}$	400	V
Maximum average forward rectified current	I _{F(AV)}	10	А
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	120	А
Storage temperature range	T _{stg}	-45℃ to +150℃	$^{\circ}$ C
Maximum operating junction temperature	TJ	150	$^{\circ}$ C

Thermal Characteristics

Characteri	Symbol	Value	Unit	
Maximum thermal resistance	junction to case	$R_{\text{th(j-c)}}$	3.5	°C/W

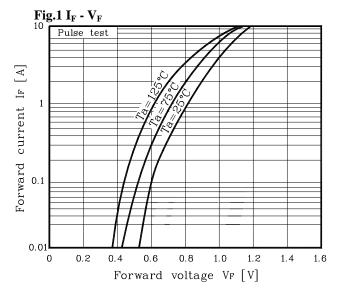
Electrical Characteristics

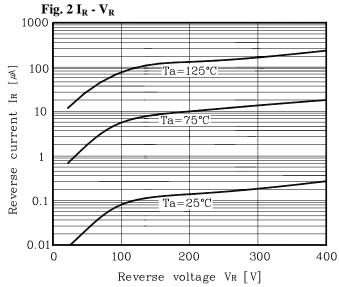
Characteristic	Symbol	Test Condition		Min.	Тур.	Max.	Unit
Peak forward voltage drop	V _{FM} ⁽¹⁾	I _{FM} = 10A	T _j =25℃	-	ı	1.40	V
			T _j =125℃	-	-	1.20	٧
Reverse leakage current	I _{RM} ⁽¹⁾	$V_R = V_{RRM}$	T _j =25℃	-	-	20	uA
			T _j =125℃	-	ı	200	uA
Reverse recovery time	t _{rr}	I _F = 1A, di/dt =-100 A/us		-	-	30	ns
Junction capacitance	C _j	$V_R = 10V_{DC}$, f=1MHz		-	65	-	pF

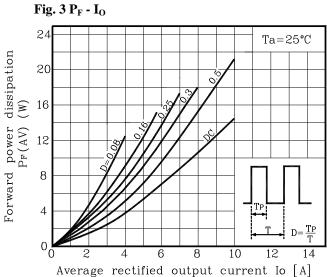
Note : (1) Pulse test : $t_P\!\leq\!380~\mu\!\text{s},\,Duty~cycle}\!\leq\!2\%$

SF10A400H

Electrical Characteristic Curves







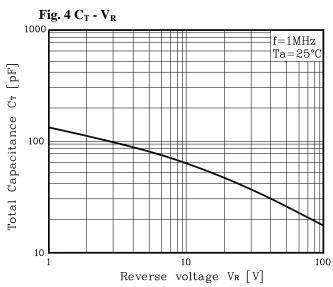


Fig. 5 I_{FSM} – Number of cycle

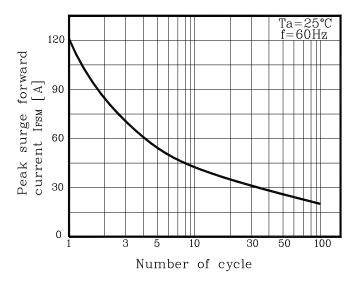
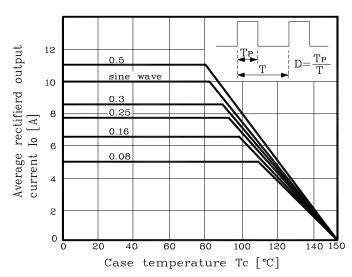
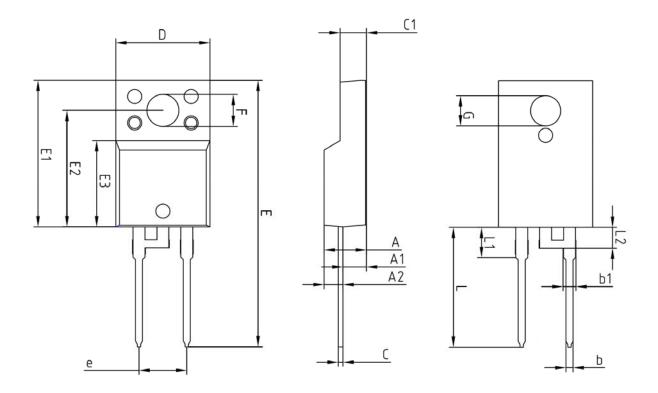


Fig. 6 I₀ derating - T_C



SF10A400H

Package Outline Dimension



	MILLIMETERS			NOTE
SYMBOL	MINIMUM	NOMINAL	MAXIMUM	NOTE
Α	-	_	4.60	
A1	2.45	2.50	2.55	
A2	1.95	2.00	2.05	
b	0.65	0.75	0.85	
Ь1	1.07	1.27	1.47	
С	0.40	0.50	0.60	
C1	2.70	2.80	2.90	
D	9.90	10.00	10.10	
Ε	28.00	_	28.60	
E1	15.50	15.60	15.70	
E2	12.30	12.40	12.50	
E3	9.15	9.20	9.25	
F	3.30	3.40	3.50	
G	3.10	3.20	3.30	
е	5.08 BSC			
L	12.40	 3.46_BS	13.00	
L1				
L2				

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