

SF10S400D2

Ultrafast Recovery Rectifier

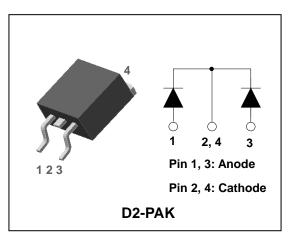
400V, 10A ULTRAFAST RECOVERY RECTIFIERS

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

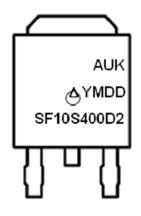
The SF10S400D2 is ideally as boost diode in discontinuous or critical mode power factor corrections.

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
SF10S400D2	SF10S400D2	D2-PAK	Tape & Reel

Marking Information



AUK = Manufacture Logo

 Δ = Control Code of Manufacture

YMDD = Date Code Marking

-. Y = Year Code

-. M = Monthly Code

-. DD = Daily Code

SF10S400D2 = 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	V _{RRM} V _{RWM} V _R	400	V
Maximum average forward rectified current	I _{F(AV)}	10	Α
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℃	${\mathbb C}$
Maximum operating junction temperature	TJ	150	${\mathbb C}$

Thermal Characteristics

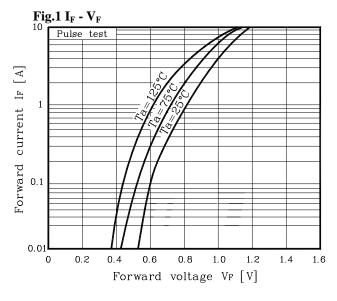
Characteri	Symbol	Value	Unit	
Maximum thermal resistance	junction to case	$R_{\text{th(j-c)}}$	3.0	°C/W

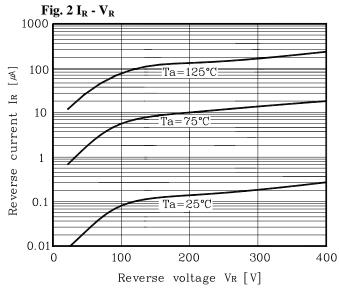
Electrical Characteristics

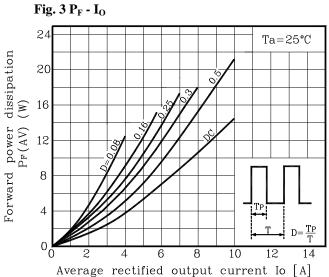
Characteristic	Symbol	Test Condition		Min.	Тур.	Max.	Unit
Peak forward voltage drop	V _{FM} ⁽¹⁾	I _{FM} = 10A	T _j =25℃	-	-	1.40	V
			T _j =125℃	-	ı	1.20	٧
Reverse leakage current	I _{RM} ⁽¹⁾	$V_R = V_{RRM}$	T _j =25℃	-	ı	20	uA
			T _j =125℃	-	ı	200	uA
Reverse recovery time	t _{rr}	I _F = 1A, di/dt =-100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

Note : (1) Pulse test : $t_P \le 380~\mu s$, Duty cycle $\le 2\%$

Electrical Characteristic Curves







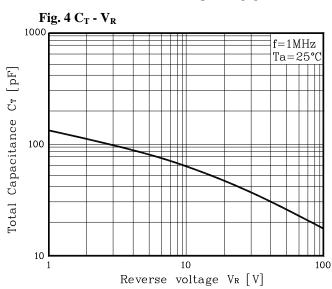
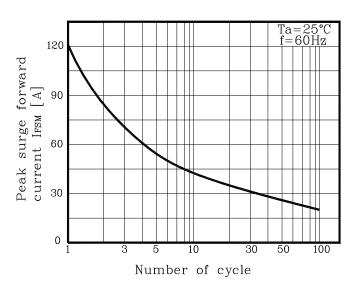
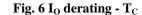
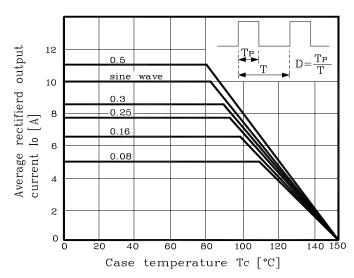


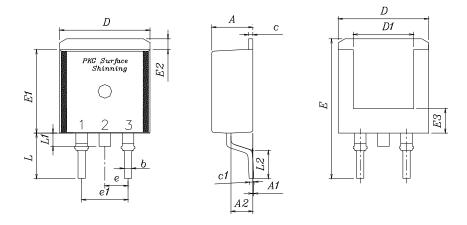
Fig. 5 I_{FSM} – Number of cycle





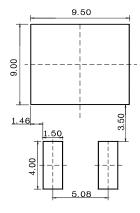


Package Outline Dimension



SYMBOL	1	NOTE		
SIMDOL	MINIMUM	INOTE		
Α	4.35	4.50	4.65	
Α1	_	1	0.15	
A2	2.20	2.40	2.60	
b	0.70	0.80	0.90	
С	0.40	0.50	0.60	
c1	0.40	0.50	0.60	
D	9.80	10.00	10.20	
D1	6.40	6.60	6.80	
Ε	15.00	15.40	15.80	
E1	9.05	9.20	9.35	
E2	1.00	1.20	1.40	
E3	2.50	2.70	2.90	
е	2.34	2.54	2.74	
e1	4.88	5.08	5.28	
L	4.60	5.00	5.40	
L1	1.40	1.45	1.50	
L2	2.50	_	_	

**** Recommend PCB solder land (Unit: mm)**



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