

Switching type power supply applications.

FEATURES

- Low profile surface mount package.(Thickness 1.0mm)
- Low power loss, High efficiency.
- For use in low voltage, high frequency inverters, free wheeling and polarity protection applications.
- Suffix U : Qualified to AEC-Q101.

ex) SMAFB24-RTK/HU



SMAF (Low profile package)

PRODUCT DESCRIPTION

- Molding compound flammability rating : UL 94V-0
- Pb-Free, Halogen-Free, RoHs Compliant

Package dimensions (SMAF)	Pin configurations (Uni-directional)																		
<table border="1"> <thead> <tr> <th>DIM</th><th>MILLIMETERS</th></tr> </thead> <tbody> <tr> <td>A</td><td>4.2 ± 0.1</td></tr> <tr> <td>B</td><td>5.0 ± 0.15</td></tr> <tr> <td>C</td><td>1.35 ± 0.1</td></tr> <tr> <td>D</td><td>2.7 ± 0.1</td></tr> <tr> <td>E</td><td>0.9 ± 0.2</td></tr> <tr> <td>F</td><td>0.175 ± 0.075</td></tr> <tr> <td>G</td><td>0 ~ 0.1</td></tr> <tr> <td>H</td><td>1.0 ± 0.1</td></tr> </tbody> </table> <p>1. ANODE 2. CATHODE</p>	DIM	MILLIMETERS	A	4.2 ± 0.1	B	5.0 ± 0.15	C	1.35 ± 0.1	D	2.7 ± 0.1	E	0.9 ± 0.2	F	0.175 ± 0.075	G	0 ~ 0.1	H	1.0 ± 0.1	<p>1. ANODE 2. CATHODE</p>
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ORDERING INFORMATION

Part Number	Qty per Reel	Reel Size	Marking code
SMAFB24-RTK	3,000	7 inch	F24

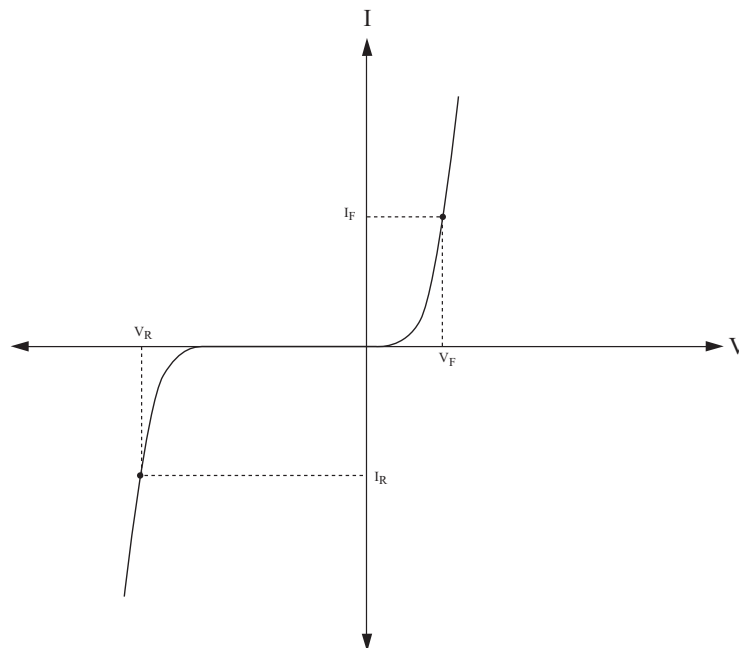
SMAFB24

MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Average Output Rectified Current	I_O	2	A
Peak forward surge current with 8.3ms single half sine wave (Note 1)	I_{FSM}	60	A
Junction Temperature	T_j	-40 ~ 150	°C
Storage Temperature Range	T_{stg}	-40 ~ 150	°C

Note 1) Non-repetitive pulse

DEFINITIONS OF ELECTRICAL CHARACTERISTIC SYMBOL



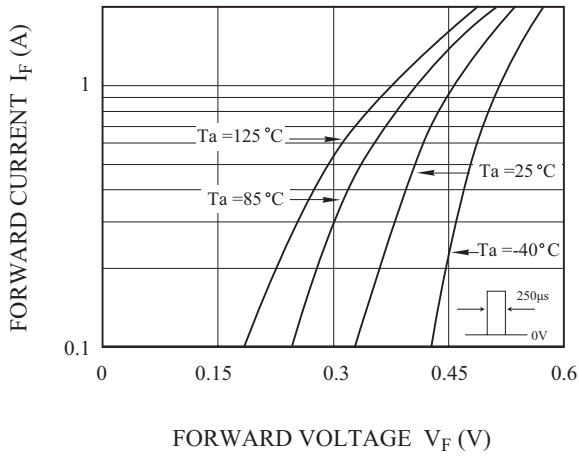
ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Peak Forward Voltage	V_{FM}	$I_{FM}=2.0A$	-	0.54	0.57	V
Repetitive Peak Reverse Current	I_{RRM}	$V_{RRM}=40V$	-	-	100	μA
Total Capacitance	C_T	$V_R=0V, f=1MHz$	-	250	-	pF
Reverse Recovery Time	t_{rr}	$V_R=30V, I_F=0.5A, I_R=0.5A$	-	18	-	ns
Thermal Resistance (Note 1)	$R_{th(j-a)}$	Junction to ambient	-	150	-	°C/W

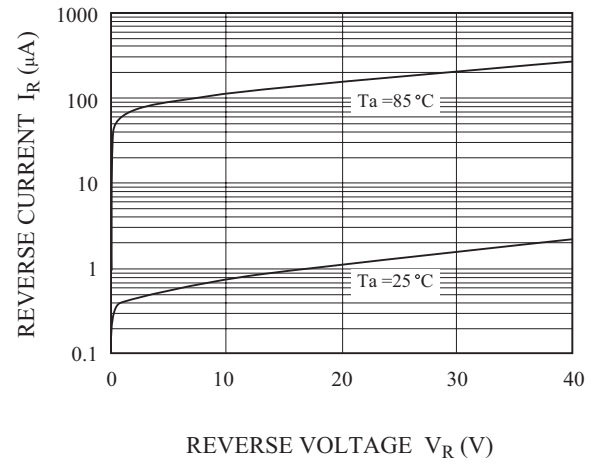
Note 1 : Mounted on a recommended FR-4 PCB board, pad dimension of 4×4mm.

SMAFB24

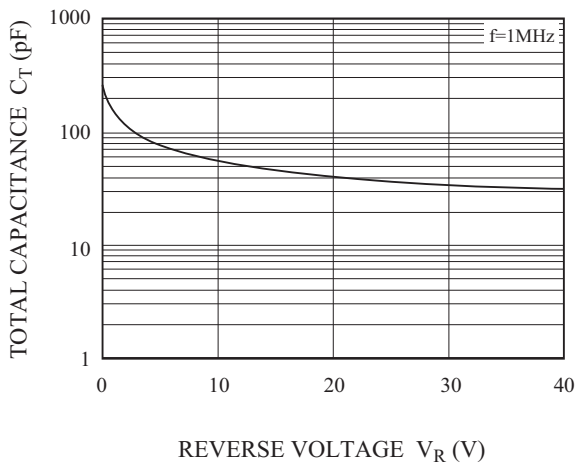
$I_F - V_F$



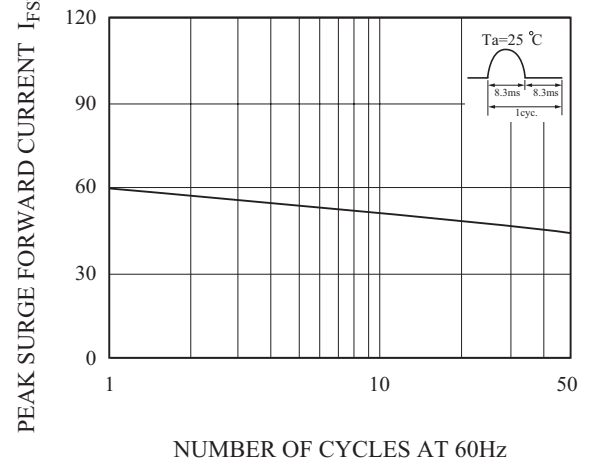
$I_R - V_R$



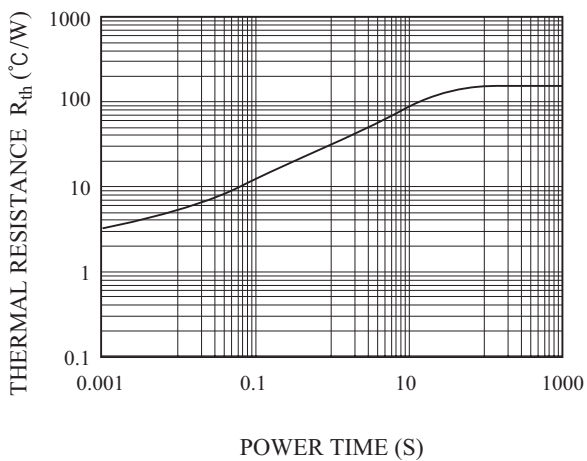
$C_T - V_R$



$I_{FSM} - \text{CYCLE CHARACTERISTICS}$



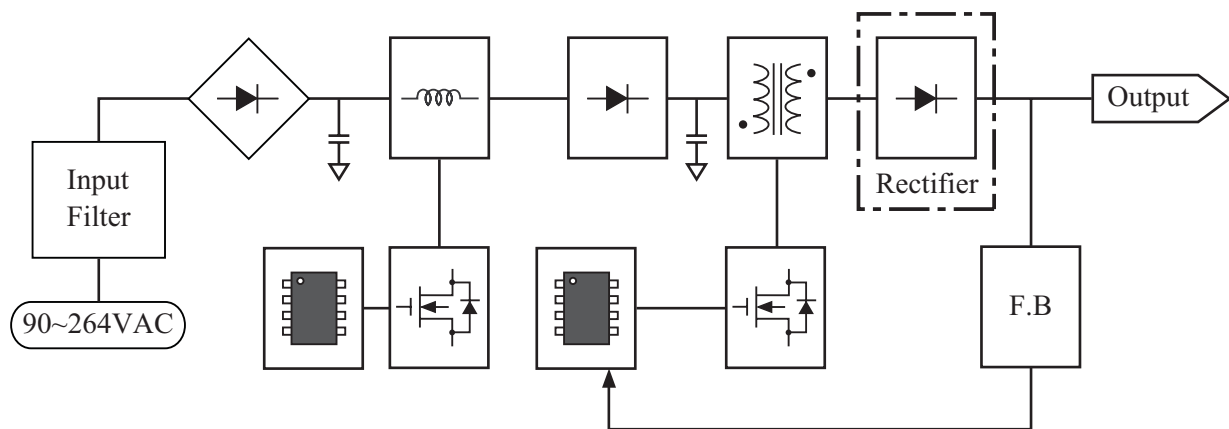
$R_{th} - \text{TIME}$



APPLICATIONS

- Charger
- Adapter(DC-DC Converter)
- Telecommunication
- Home Appliances
- Switching mode power supply

EXAMPLE OF SCHOTTKY BARRIER DIODE APPLICATION ON SMPS



Recommended pad dimension & Marking Information

Recommended pad dimension	Marking Code