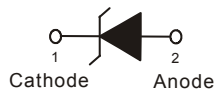
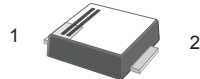


Trench MOS Barrier Schottky Rectifier

SMAF

SMBF


Features

- Advanced trench technology
- Low forward voltage drop
- Low power losses
- High efficiency operation
- Lead Free Finish, RoHS Compliant

Applications

- DC/DC Converters
- AC/DC Adaptors

Maximum ratings and electrical characteristics (T_J = 25°C unless otherwise noted)

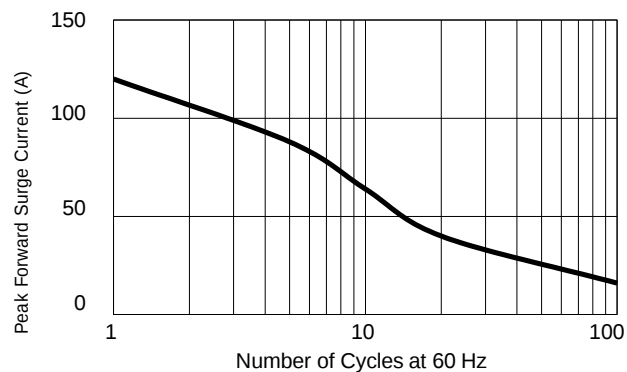
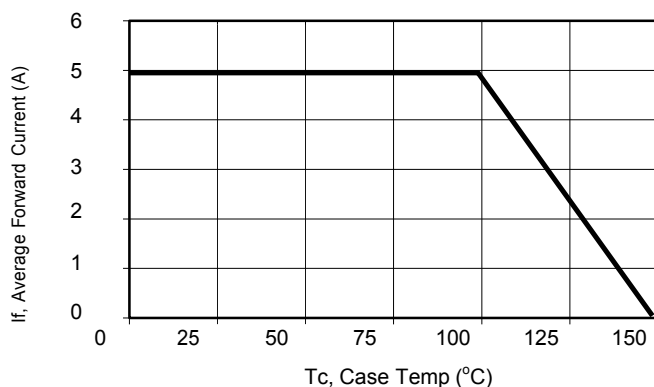
Parameter			Symbol	Limit		Unit
Maximum repetitive peak reverse voltage			V _{RRM}	45		V
Maximum average forward rectified current			I _{F(AV)}	5		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load per diode			I _{FSM}	120		A
Operating junction and storage temperature range			T _J , T _{STG}	-40 to +150		°C
Typical thermal resistance per diode (Mounted on FR-4 PCB)			R _{θJL}	22		°C/W
Instantaneous forward voltage			V _{F(1)}	TYP.	MAX.	
	I _F =5A	T _J =25°C		0.41		
	I _F =5A	T _J =125°C		0.35	-	
Instantaneous reverse current per diode at rated reverse voltage		T _J =25°C	I _{R(2)}	80	100	uA
		T _J =125°C		-	10	mA

Notes:

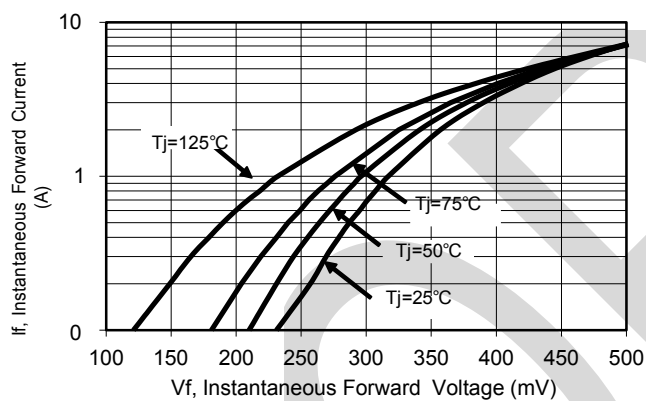
(1) Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

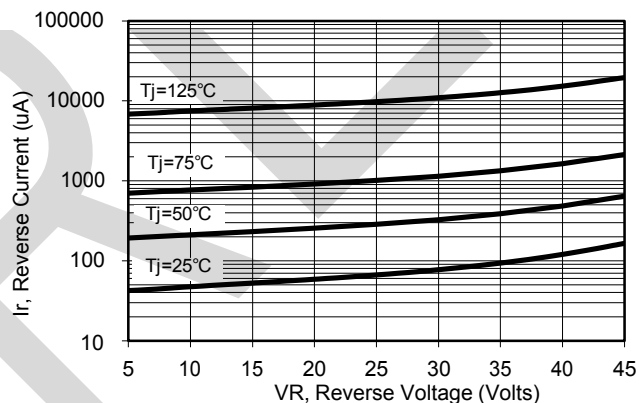
RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)



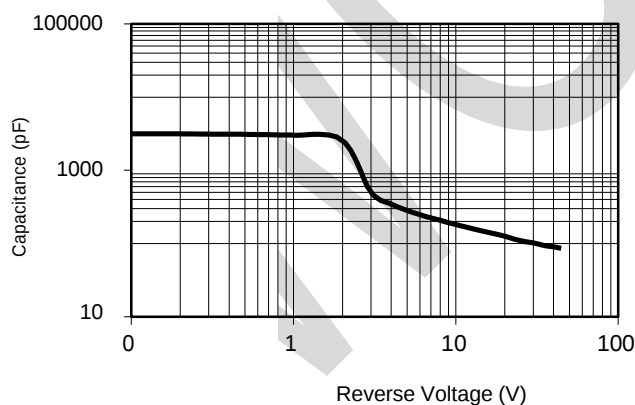
Current Derating, Case



Maximum Repetitive Surge Current



Typical Forward Voltage

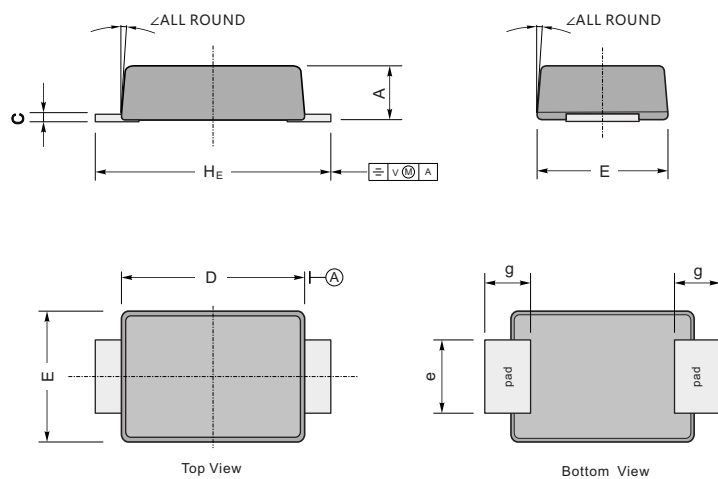


Typical Reverse Current

Typical Junction Capacitance

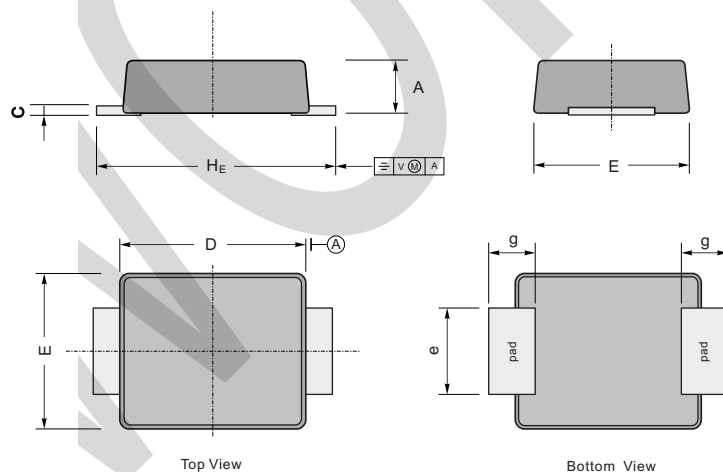
PACKAGE OUTLINE

SMAF



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

SMBF



UNIT		A	C	D	E	H _E	e	g	∠
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		