SS2FH6

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Vishay General Semiconductor

Surface Mount Schottky Barrier Rectifiers



PRIMARY CHARACTERISTICS								
I _{F(AV)}	2.0 A							
V _{RRM}	60 V							
I _{FSM}	40 A							
V_F at I_F = 2.0 A (T_A = 125 °C)	0.64 V							
T _J max.	175 °C							
Package	DO-219AB (SMF)							
Diode variations	Single die							

FEATURES

- Low profile package
- · Ideal for automated placement
- · Low forward voltage drop, low power losses
- Low leakage current
- MSL level 1, per Meets J-STD-020, LF maximum peak of 260 °C
- AEC-Q101 qualified available Automotive ordering code: base P/NHM3
- · Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS

For use in high frequency inverters, freewheeling, DC/DC converters, and polarity protection in commercial, industrial, and automotive applications.

MECHANICAL DATA

Case: DO-219AB (SMF) Molding compound meets UL 94 V-0 flammability rating Base P/N-M3 - halogen-free, RoHS-compliant Base P/NHM3 - halogen-free, RoHS-compliant, and AEC-Q101 gualified

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

M3 and HM3 suffix meets JESD 201 class 2 whisker test

Polarity: Color band denotes the cathode end

MAXIMUM RATINGS ($T_A = 25 \text{ °C}$ unless otherwise noted)							
PARAMETER	SYMBOL	SS2FH6	UNIT				
Device marking code		26					
Maximum repetitive peak reverse voltage	V _{RRM}	60	V				
Maximum average forward rectified current (fig.1)	I _{F(AV)} ⁽¹⁾	2.0	A				
Peak forward surge current 8.3 ms single half sine-wave $T_{J \text{ (init)}} = 25 ^{\circ}\text{C}$	I _{FSM}	40	А				
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +175	°C				

Note

⁽¹⁾ Free air, mounted on recommended copper pad area



COMPLIANT HALOGEN FREE

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ELECTRICAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)								
PARAMETER	TEST C	ONDITIONS	SYMBOL	TYP.	MAX.	UNIT		
Instantaneous forward voltage	I _F = 1.6 A	T 05 %C		0.69	-	V		
	I _F = 2.0 A	– T _A = 25 °C	V _E (1)	0.72	0.78			
	I _F = 1.6 A	T _A = 125 °C	VF	0.61	-			
	I _F = 2.0 A			0.64	0.69			
Reverse current	N 60.V	T _A = 25 °C	L (2)	-	3	μA		
	V _R = 60 V	T _A = 125 °C	I _R ⁽²⁾	90	450			
Typical junction capacitance	4.0 V, 1 MHz		CJ	90	-	pF		

Notes

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

⁽²⁾ Pulse test: Pulse width \leq 5 ms

THERMAL CHARACTERISTICS ($T_A = 25$ °c unless otherwise noted)							
PARAMETER	SYMBOL	SS2FH6	UNIT				
Typical thermal resistance	R _{0JA} (1)(2)(3)	125	°C/W				
	R _{0JM} (1)(2)(3)	21	0/11				

Notes

 $^{(1)}$ The heat generated must be less than the thermal conductivity from junction-to-ambient: $dP_D/dT_J < 1/R_{\theta JA}$

⁽²⁾ Device mounted on FR4 PCB, 2 oz. standard footprint

 $^{(3)}$ Thermal resistance $R_{\theta JA}$ - junction to ambient; $R_{\theta JM}^{}$ - junction to mount

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
SS2FH6-M3/H	0.015	Н	3000	7" diameter plastic tape and reel				
SS2FH6-M3/I	0.015	I	10 000	13" diameter plastic tape and reel				
SS2FH6HM3/H (1)	0.015	н	3000	7" diameter plastic tape and reel				
SS2FH6HM3/I ⁽¹⁾	0.015	l	10 000	13" diameter plastic tape and reel				

Note

(1) AEC-Q101 qualified



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

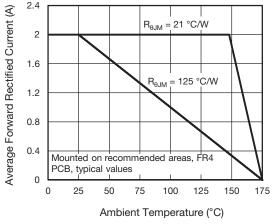


Fig. 1 - Maximum Forward Current Derating Curve

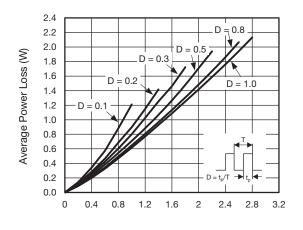
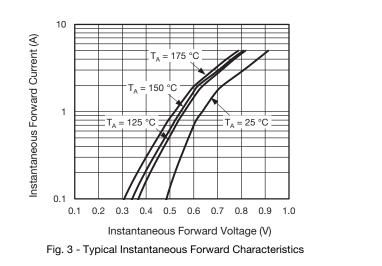


Fig. 2 - Average Power Loss Characteristics



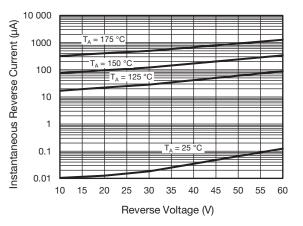


Fig. 4 - Typical Reverse Leakage Characteristics

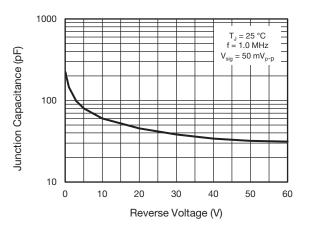
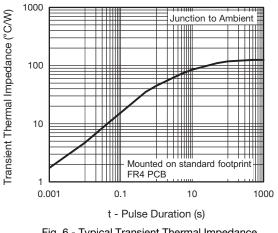


Fig. 5 - Typical Junction Capacitance





Revision: 24-Nov-14

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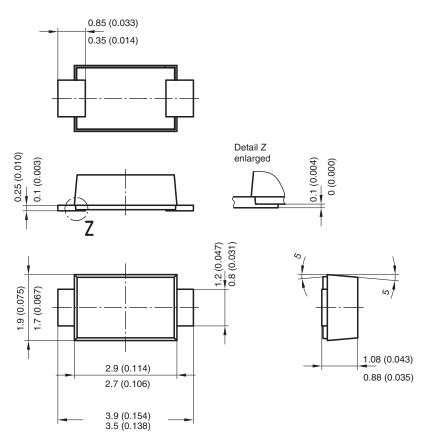
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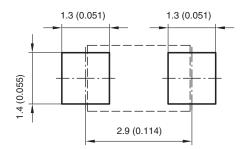


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PACKAGE OUTLINE DIMENSIONS in millimeters (inches)



Foot print recommendation:



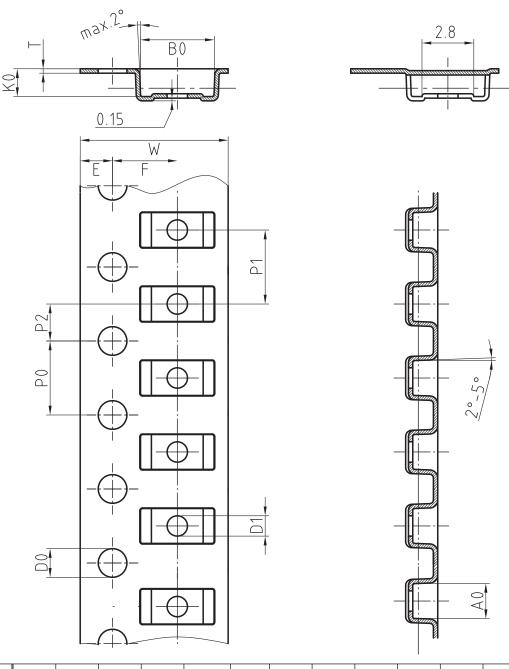
Created - Date: 15. February 2005 Rev. 3 - Date: 13. March 2007 Document no.:S8-V-3915.01-001 (4) 17247





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BLISTERTAPE DIMENSIONS in millimeters: DO-219AB (SMF)



Mat:	A0	B0	K0	W	Т	Ρ0	P2	P1	D0	D1	E	F
PS	1.9	4.0	1.5	8.0	0.235	4.0	2.0	4.0	1.5	1	1.75	3.5

Document-No.: S8-V-3717.02-001 (3)

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