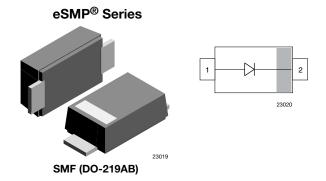


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Fast Rectifier Surface-Mount

r dot riodinior dariado midan



LINKS TO ADDITIONAL RESOURCES



FEATURES







Glass passivated

 Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C



Meets JESD 201 class 2 whisker test

• Wave and reflow solderable

• AEC-Q101 qualified

 Compatible to SOD-123W package case outline or SOD-123F and SOD-123FL

 Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

MECHANICAL DATA

Case: SMF (DO-219AB)

Polarity: band denotes cathode end

Weight: approx. 15 mg
Packaging codes / options:
GS18/10K per 13" reel (8 mm tape)
GS08/3K per 7" reel (8 mm tape)
Circuit configuration: single

PARTS TABLE					
PART	ORDERING CODE	MARKING	REMARKS		
RS07B	RS07B-GS18 or RS07B-GS08	RB	Tape and reel		
RS07D	RS07D-GS18 or RS07D-GS08	RD	Tape and reel		
RS07G	RS07G-GS18 or RS07G-GS08	RG	Tape and reel		
RS07J	RS07J-GS18 or RS07J-GS08	RJ	Tape and reel		
RS07K	RS07K-GS18 or RS07K-GS08	RK	Tape and reel		

PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		RS07B	V _{RRM}	100	V
		RS07D	V _{RRM}	200	V
		RS07G	V _{RRM}	400	V
		RS07J	V_{RRM}	600	V
		RS07K	V_{RRM}	800	V
		RS07B	V_{RMS}	70	V
		RS07D	V _{RMS}	140	V
Maximum RMS voltage		RS07G	V _{RMS}	280	V
-		RS07J	V_{RMS}	420	V
		RS07K	V _{RMS}	560	V
Maximum DC blocking voltage		RS07B	V_{DC}	100	V
		RS07D	V_{DC}	200	V
		RS07G	V_{DC}	400	V
		RS07J	V_{DC}	600	V
		RS07K	V_{DC}	800	V
Market and a second and the second	T _L = 65 °C		I _{F(AV)}	1.4	Α
Maximum average forward rectified current	T _A = 45 °C		I _{F(AV)}	0.5	Α
Peak forward surge current 8.3 ms half sine-wave	T _L = 25 °C		I _{FSM}	30	Α



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THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to lead		R _{thJL}	30	K/W	
Thermal resistance junction to ambient air (1)		R_{thJA}	180	K/W	
Operating junction and storage temperature range		T _j , T _{stg}	-55 to 150	°C	

Note

 $^{^{(1)}}$ Mounted on epoxy glass PCB with 3 mm x 3 mm Cu pads (\geq 40 μm thick)

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Instantaneous forward voltage	I _F = 0.7 A ⁽¹⁾	RS07B	V_{F}			1.15	V
		RS07D	V_{F}			1.15	V
		RS07G	V_{F}			1.15	V
		RS07J	V_{F}			1.15	V
	$I_F = 1 A^{(1)}$	RS07K	V_{F}			1.3	V
	T _A = 25 °C	RS07B	I _R			10	μΑ
		RS07D	I _R			10	μΑ
		RS07G	I _R			10	μA
		RS07J	I _R			10	μΑ
Maximum DC reverse current at		RS07K	I _R			2	μΑ
rated DC blocking voltage		RS07B	I _R			50	μΑ
	T _A = 125 °C	RS07D	I _R			50	μΑ
		RS07G	I _R			50	μΑ
		RS07J	I _R			50	μΑ
		RS07K	I _R			150	μΑ
Reverse recovery time	I _F = 0.5 A, I _R = 1 A, I _{rr} = 0.25 A	RS07B	t _{rr}			150	ns
		RS07D	t _{rr}			150	ns
		RS07G	t _{rr}			150	ns
		RS07J	t _{rr}			250	ns
		RS07K	t _{rr}			300	ns
	4 V, 1 MHz	RS07B	Cj		9		pF
Typical capacitance		RS07D	Ci		9		pF
		RS07G	Ci		9		pF
		RS07J	Ci		9		pF
		RS07K	Ci		4		pF

Note

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

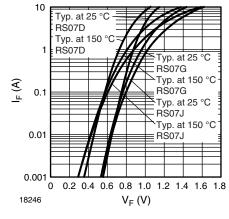


Fig. 1 - Typical Forward Characteristics

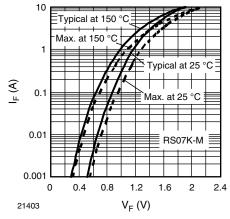


Fig. 2 - Typical Forward Characteristics

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

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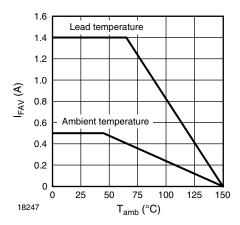


Fig. 3 - Forward Current Derating Curve

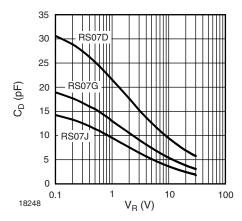


Fig. 4 - Typical Diode Capacitance vs. Reverse Voltage

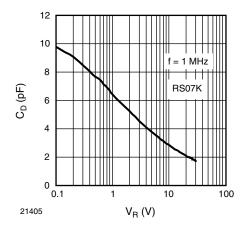


Fig. 5 - Typical Diode Capacitance vs. Reverse Voltage

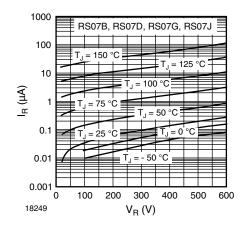


Fig. 6 - Typical Reverse Characteristics

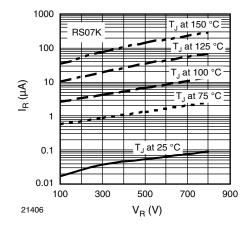
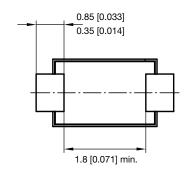


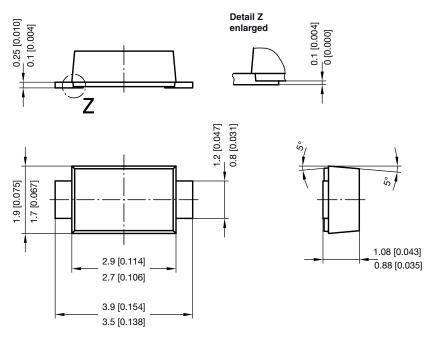
Fig. 7 - Typical Reverse Characteristics

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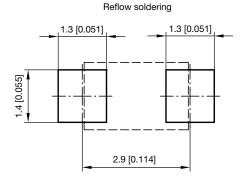
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PACKAGE DIMENSIONS in millimeters (inches): SMF (DO-219AB)





foot print recommendation:



Created - Date: 15. February 2005 Rev. 6 - Date: 24.Feb.2021

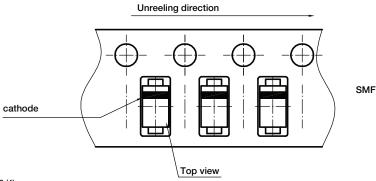
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RS07B, RS07D, RS07G, RS07J, RS07K

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ORIENTATION IN CARRIER TAPE - SMF (DO-219 AB)



Document no.: S8-V-3717.02-003 (4) Created - Date: 09. Feb. 2010

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