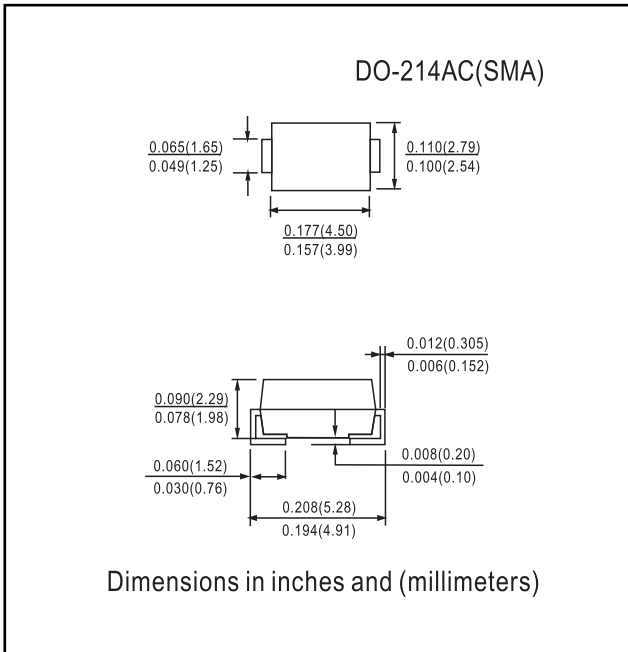




- FEATURES**
- Low profile package
  - Ideal for automated placement
  - Trench MOS Schottky technology
  - Low power losses, high efficiency
  - Low forward voltage drop
  - Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
  - Not recommended for PCB bottom side wave mounting
  - Compliant to RoHS Directive 2002/95/EC and in accordance to WEEE 2002/96/EC
  - **Halogen-free according to IEC 61249-2-21 definition**



**Mechanical Data**

**Case:** DO-214AC (SMA)  
Molding compound meets UL 94 V-0 flammability rating  
Base P/N-M3 - halogen-free, RoHS compliant, and commercial grade

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102  
M3 suffix meets JESD 201 class 1A whisker test

**Polarity:** Color band denotes the cathode end

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

<b>MAXIMUM RATINGS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VSSA210	UNIT
Device marking code		V2B	
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum DC forward current	$I_F^{(1)}$	2.0	A
	$I_F^{(2)}$	1.7	
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	$I_{FSM}$	60	A
Operating junction and storage temperature range	$T_J, T_{STG}$	- 40 to + 150	$^\circ\text{C}$

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Breakdown voltage	$I_R = 1.0\text{ mA}$	$T_A = 25\text{ }^\circ\text{C}$	$V_{BR}$	100 (minimum)	-	V
Instantaneous forward voltage	$I_F = 2.0\text{ A}$	$T_A = 25\text{ }^\circ\text{C}$	$V_F^{(1)}$	0.61	0.70	
		$T_A = 125\text{ }^\circ\text{C}$		0.56	0.65	
Reverse current	$V_R = 70\text{ V}$	$T_A = 25\text{ }^\circ\text{C}$	$I_R^{(2)}$	1.0	-	$\mu\text{A}$
		$T_A = 125\text{ }^\circ\text{C}$		0.95	-	mA
	$V_R = 100\text{ V}$	$T_A = 25\text{ }^\circ\text{C}$		3.5	150	$\mu\text{A}$
		$T_A = 125\text{ }^\circ\text{C}$		2.2	15	mA
Typical junction capacitance	4.0 V, 1 MHz		$C_J$	175	-	pF

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VSSA210	UNIT
Typical thermal resistance	$R_{\theta JA}^{(1)}$	135	$^\circ\text{C/W}$
	$R_{\theta JM}^{(2)}$	25	

**Notes**  
 (1) Free air, mounted on recommended PCB 1 oz. pad area; thermal resistance  $R_{\theta JA}$  - junction to ambient  
 (2) Units mounted on PCB with 8 mm x 8 mm copper pad areas;  $R_{\theta JM}$  - junction to mount



RATINGS AND CHARACTERISTIC CURVES VSSA210

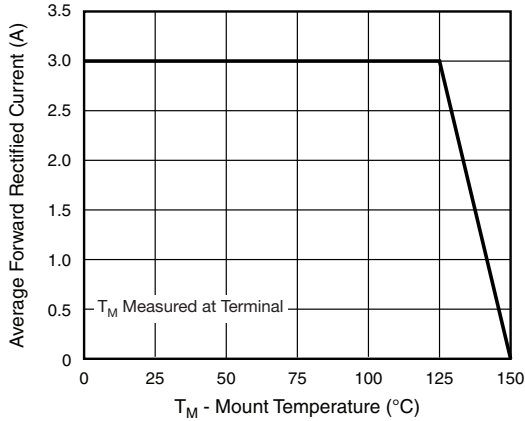


Fig. 1 - Maximum Forward Current Derating Curve

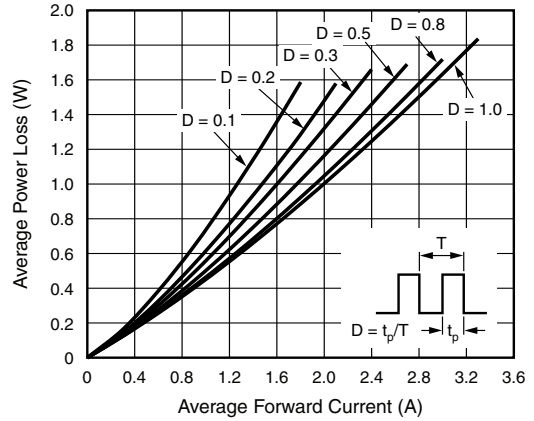


Fig. 2 - Forward Power Loss Characteristics

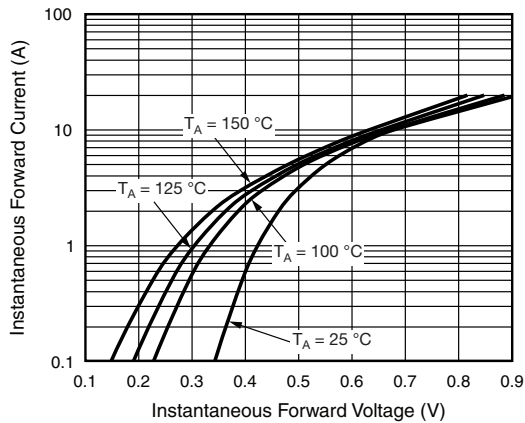


Fig. 3 - Typical Instantaneous Forward Characteristics

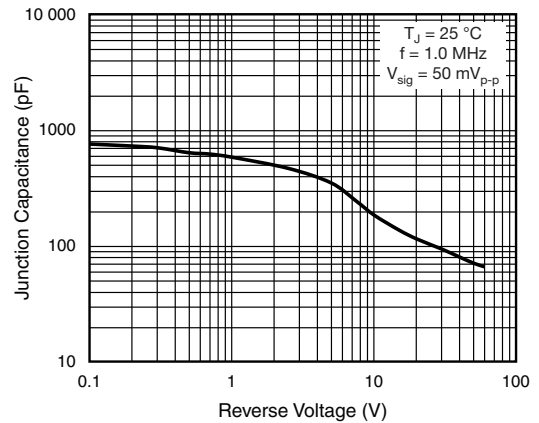


Fig. 5 - Typical Junction Capacitance

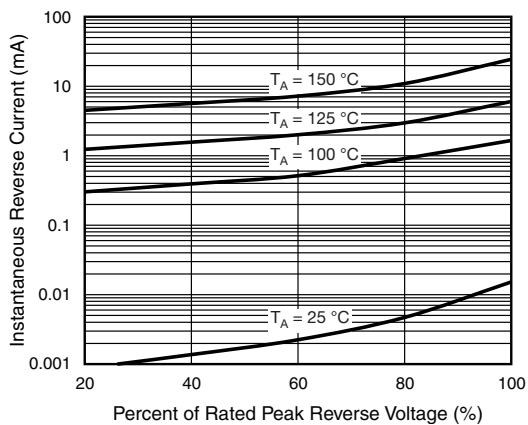


Fig. 4 - Typical Reverse Characteristics

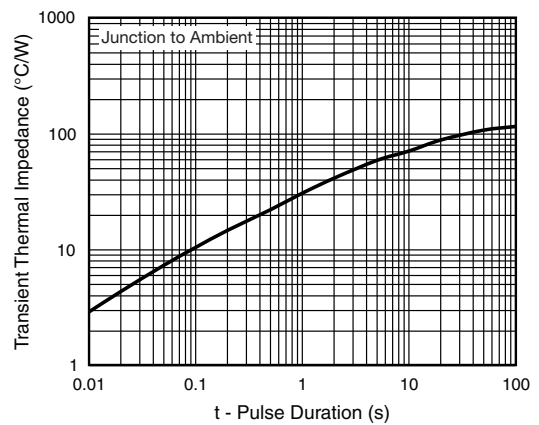


Fig. 6 - Typical Transient Thermal Impedance