



TAYCHIPST Surface Mount Trench MOS Barrier Schottky Rectifier

VSSA3L6S

60V 3.0A

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)

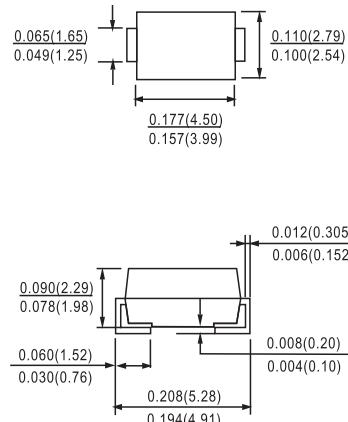
Molding compound meets UL 94 V-0 flammability rating
Base P/N-M3 - halogen-free, RoHS compliant, and commercial grade

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

DO-214AC(SMA)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	VSSA3L6S	UNIT
Device marking code		3L6	
Maximum repetitive peak reverse voltage	V_{RRM}	60	V
Maximum DC forward current	I_F ⁽¹⁾	3.0	A
	I_F ⁽²⁾	2.5	
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	I_{FSM}	80	A
Voltage rate of change (rated V_R)	dV/dt	10 000	V/ μs
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150	°C

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Instantaneous forward voltage	$I_F = 3.0 \text{ A}$	V_F ⁽¹⁾	0.49	0.58	V
			0.41	0.50	
Reverse current	$V_R = 60 \text{ V}$	I_R ⁽²⁾	-	1500	μA
			6.0	30	mA
Typical junction capacitance	4.0 V, 1 MHz	C_J	395	-	pF

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	VSSA3L6S	UNIT
Typical thermal resistance	$R_{\theta JA}$ ⁽¹⁾	115	°C/W
	$R_{\theta JM}$ ⁽²⁾	15	

Notes

(1) Free air, mounted on recommended PCB, 1 oz. pad area; thermal resistance $R_{\theta JA}$ - junction to ambient

(2) Mounted on 10 mm x 10 mm pad areas, 1 oz. FR4 PCB; $R_{\theta JM}$ - junction to mount



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RATINGS AND CHARACTERISTIC CURVES

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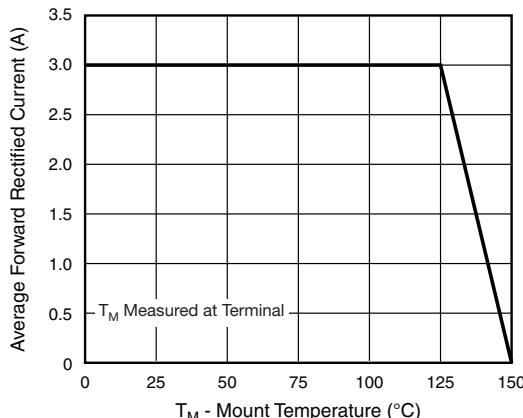


Fig. 1 - Maximum Forward Current Derating Curve

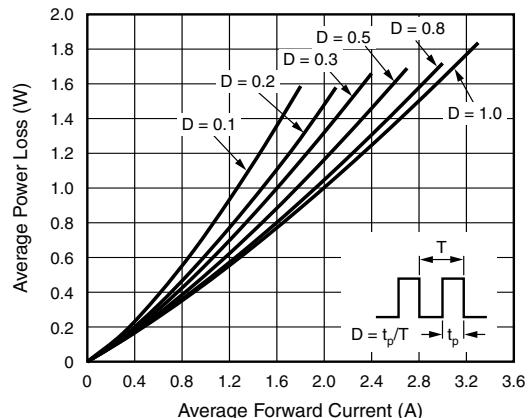


Fig. 2 - Forward Power Loss Characteristics

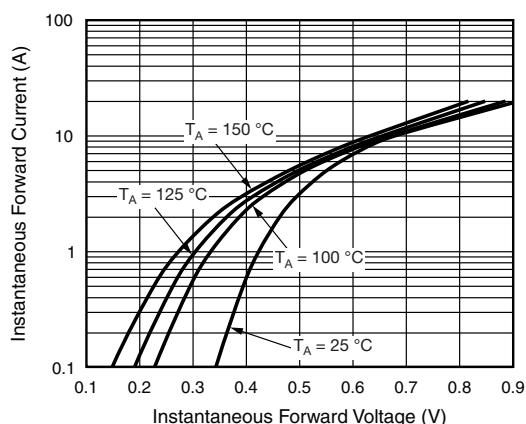


Fig. 3 - Typical Instantaneous Forward Characteristics

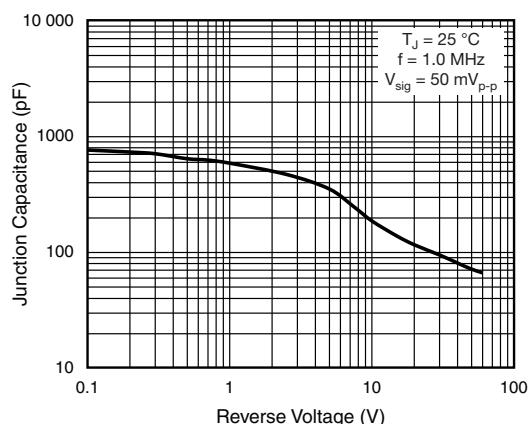


Fig. 5 - Typical Junction Capacitance

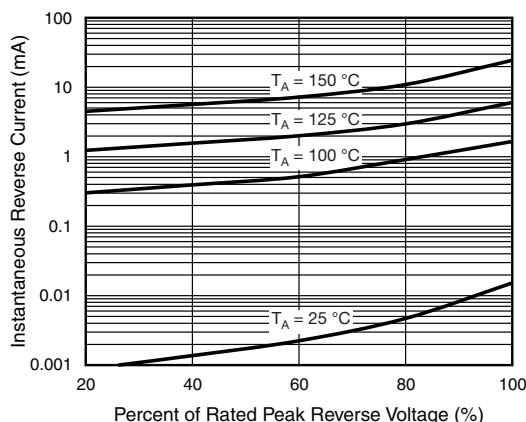


Fig. 4 - Typical Reverse Characteristics

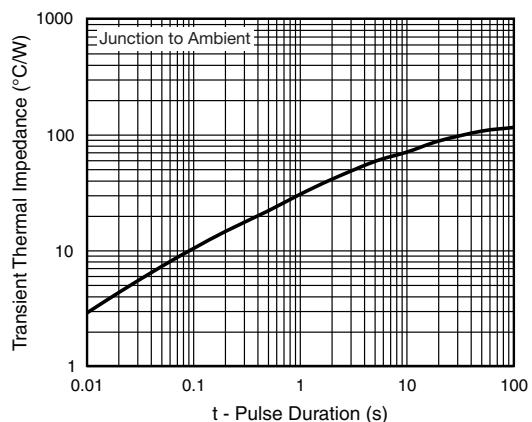


Fig. 6 - Typical Transient Thermal Impedance