



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)

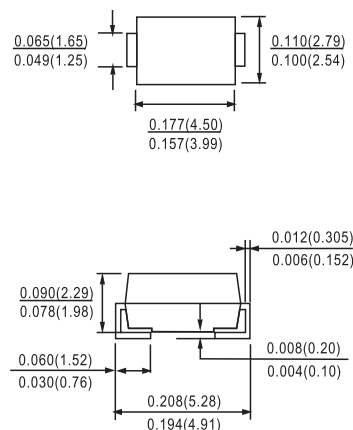
Molding compound meets UL 94 V-0 flammability rating
Base P/N-M3 - halogen-free, RoHS compliant, and commercial grade

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)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS (T_A = 25 °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 °C unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Instantaneous forward voltage	I _F = 3.0 A	V _F ⁽¹⁾	0.49	0.58	V
			0.41	0.50	
Reverse current	V _R = 60 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 °C unless otherwise specified)

PARAMETER	SYMBOL	VSSA3L6S	UNIT
Typical thermal resistance	R _{θJA} ⁽¹⁾	115	°C/W
	R _{θJM} ⁽²⁾	15	

Notes

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

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



TAYCHIPST

Surface Mount Trench MOS Barrier Schottky Rectifier

VSSA3L6S

60V 3.0A

RATINGS AND CHARACTERISTIC CURVES

VSSA3L6S

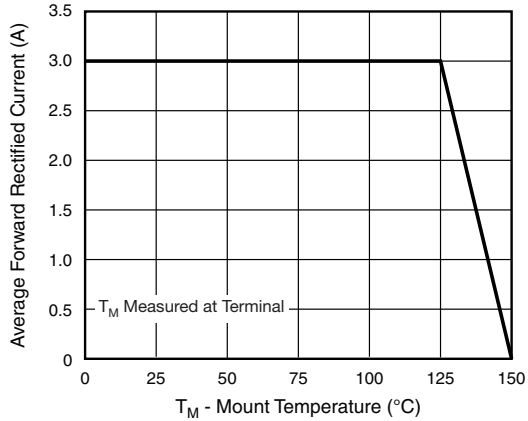


Fig. 1 - Maximum Forward Current Derating Curve

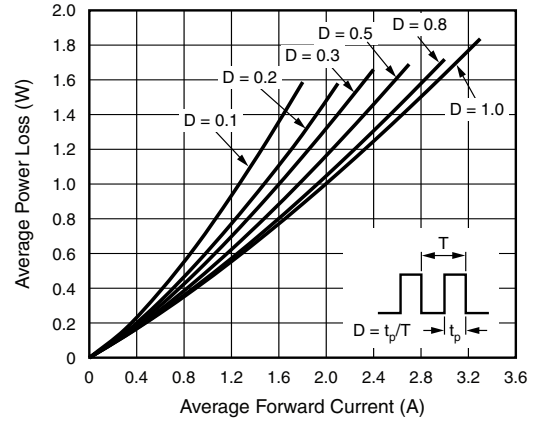


Fig. 2 - Forward Power Loss Characteristics

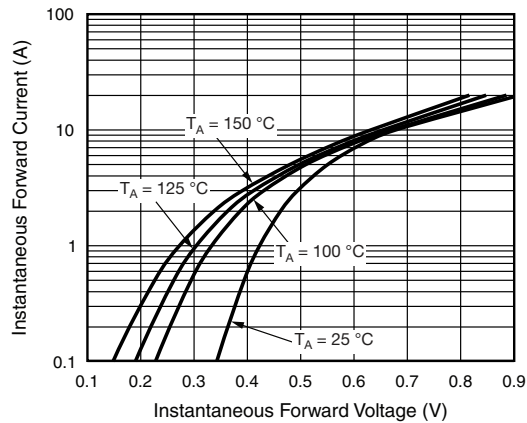


Fig. 3 - Typical Instantaneous Forward Characteristics

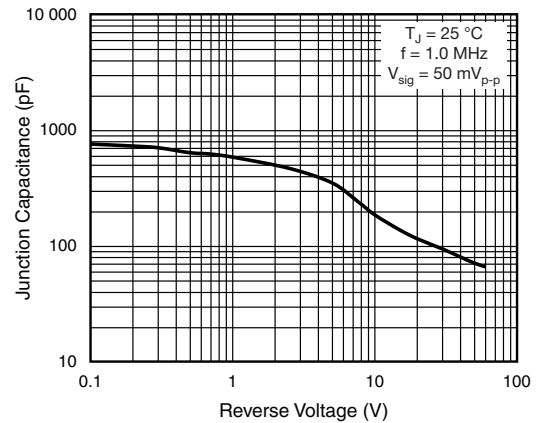


Fig. 5 - Typical Junction Capacitance

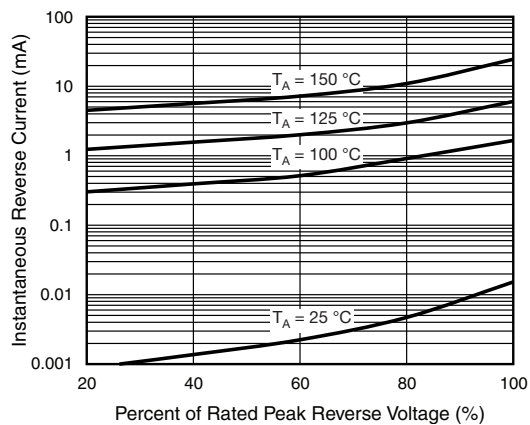


Fig. 4 - Typical Reverse Characteristics

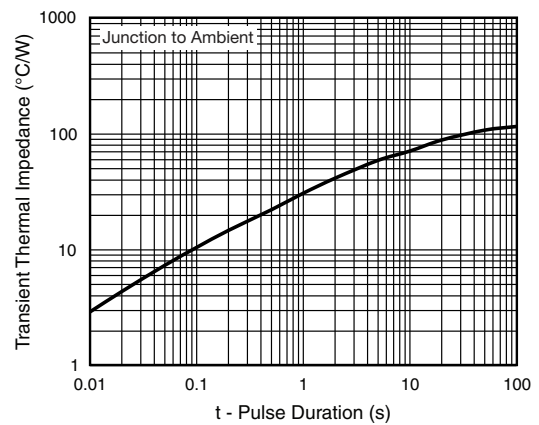


Fig. 6 - Typical Transient Thermal Impedance