



SL12~SL14

## Surface Mount Low VF Schottky Rectifiers

## Major Ratings and Characteristics

$I_{F(AV)}$	1.0 A
$I_{FSM}$	40 A
$V_F$	0.40 V
$T_j$ max.	150 °C



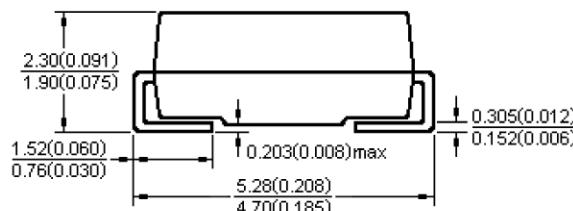
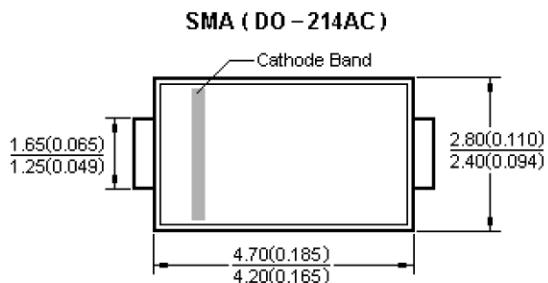
SMA (DO-214AC)

## Features

- Low profile package
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- High temperature soldering:  
260 °C/10 seconds at terminals
- Component in accordance to  
RoHS 2002/95/1 and WEEE 2002/96/EC

## Mechanical Data

- **Case:** JEDEC DO-214AC molded plastic body over passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end



Dimensions in millimeters and (inches)

## Maximum Ratings &amp; Thermal Characteristics &amp; Electrical Characteristics

(T<sub>A</sub> = 25 °C unless otherwise noted)

	Symbol	SL12	SL13	SL14	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	V
Maximum RMS voltage	$V_{RMS}$		28		V
Maximum DC blocking voltage	$V_{DC}$		40		V
Maximum average forward rectified current	$I_{F(AV)}$		1		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$		40		A
Maximum instantaneous forward voltage at 1.0A(Note1)	$V_F$		0.40		V
Maximum DC reverse current T <sub>A</sub> = 25 °C at Rated DC blocking voltage T <sub>A</sub> = 100°C	$I_R$		1.0 5.0		mA
Voltage rate of change (rated $V_F$ )	dv/dt		10000		V/μs
Thermal resistance from junction to ambient(Note2)	$R_{θJA}$		88		°C / W
Operating junction and storage temperature range	$T_J$ , $T_{STG}$		- 65 to +150		°C

Note1:Pulse Test with PW =300μsec, 1% Duty Cycle.

Note2:Mounted on P.C. Board with 5.0mm<sup>2</sup> (.013mm thick) copper pad areas.



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### Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

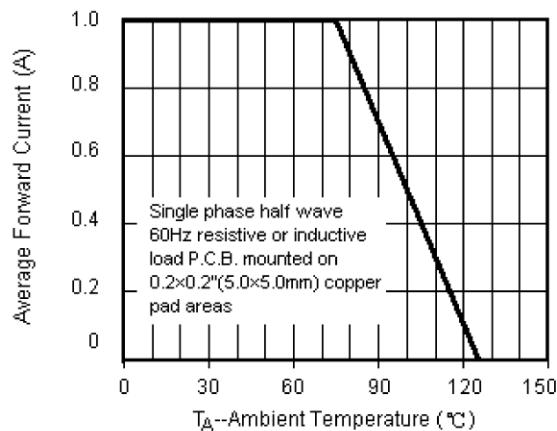


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

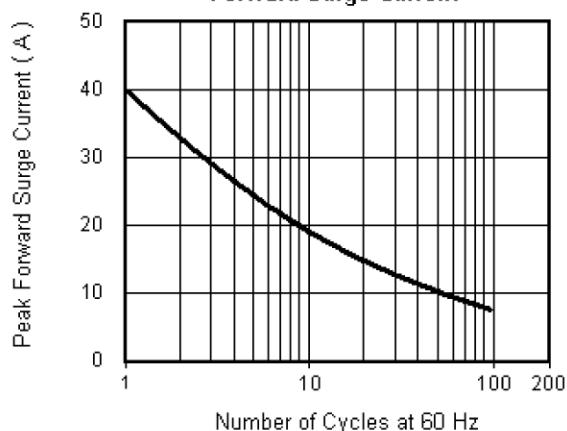


Fig.3 Typical Instantaneous Forward Characteristics

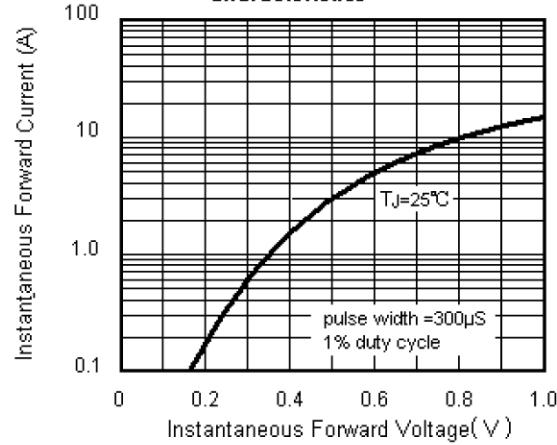


Fig.4 Typical Junction Capacitance

