

# AUTOMOTIVE SCHOTTKY BARRIER RECTIFIER

## Features :

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU
- AEC-Q101 qualified and PPAP capable

Reverse Voltage - 100 Volts  
 Forward Current - 2.0Amperes



**AEC-Q101 Qualified**

## Mechanical Data :

- Case: JEDEC SMA(DO-214AC) molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002ounce, 0.064 gram

DO-214AC (SMA)



## Application :

For use in low voltage ,high frequency inverters ,DC/DC converters,  
 free wheeling ,and polarity protection applications

## MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified )

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum average forward rectified current (see fig.1)	$I_{F(AV)}$	2.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	80	A
Operating junction temperature range	$T_J$	-55 to+ 150	°C
Storage temperature range	$T_{stg}$	-55 to+ 150	°C

## RATINGS AND CHARACTERISTIC OF KWSS210L-V

ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	I <sub>F</sub> =2.0A	T <sub>A</sub> =25°C	V <sub>F</sub> <sup>1)</sup>	0.71	0.75	V
		T <sub>A</sub> =100°C		0.59	--	
		T <sub>A</sub> =125°C		0.55	--	
Reverse current	V <sub>R</sub> =100V	T <sub>A</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	--	5	μA
		T <sub>A</sub> =100°C		--	0.5	mA
		T <sub>A</sub> =125°C		--	1.5	
Typical junction capacitance	4V, 1MHz		C <sub>J</sub>	100		pF

Notes: 1.Pulse test: 300 μs pulse width, 1% duty cycle

2.Pulse test: pulse width ≤ 40ms

## THERMAL CHARACTERISTICS

Parameter	Symbol	KWSS210L-V	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJA</sub>	88.0	°C/W
	R <sub>θJL</sub>	28.0	

3. Unit mounted on PC board with 5.0mm × 5.0 mm (0.013 mm thick) copper pads as heat sink

## AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
KWSS210L-V	T/R	Φ330	7500	330×35×333	2	364×364×360	8

## RATINGS AND CHARACTERISTIC OF KWSS210L-V

FIG.1-FORWARD CURRENT DERATING CURVE

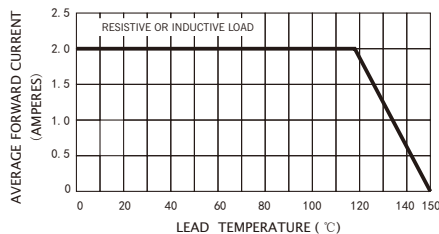


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

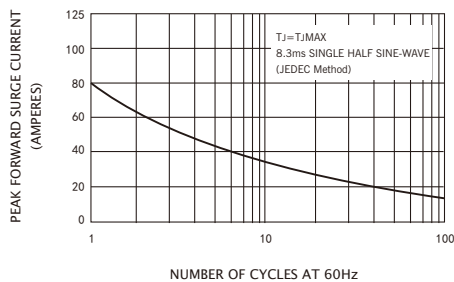


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

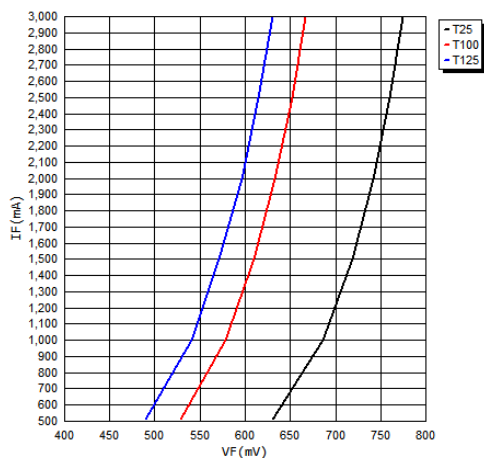


FIG.4-TYPICAL REVERSE CHARACTERISTICS

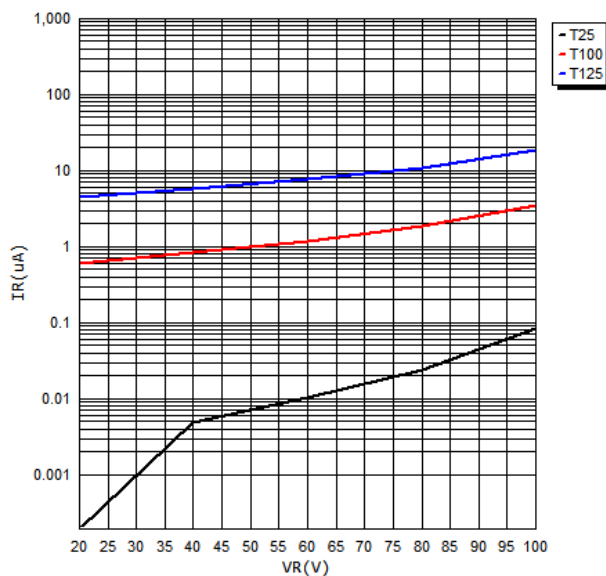
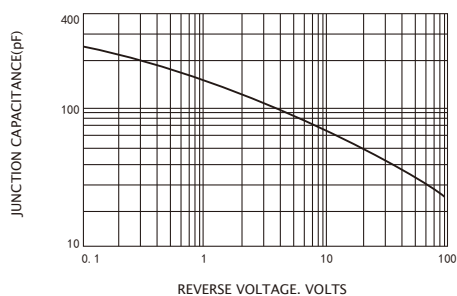
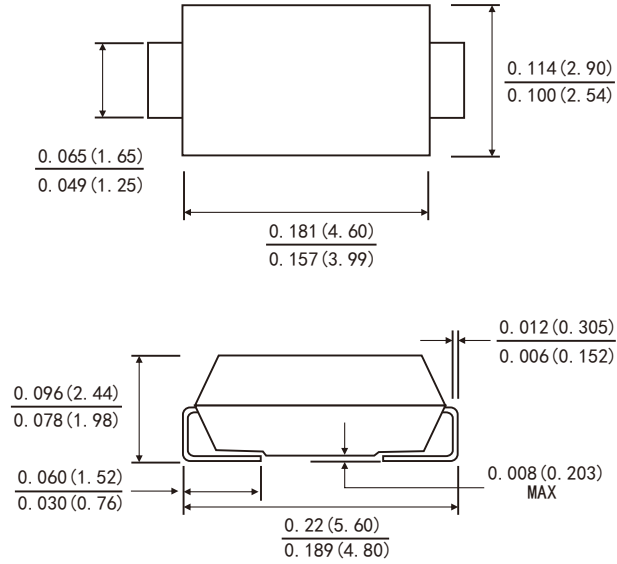


FIG.5-TYPICAL JUNCTION CAPACITANCE

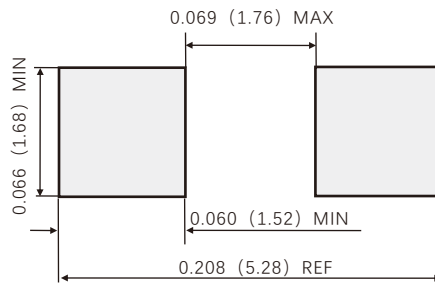


PACKAGE OUTLINE DIMENSIONS

SMA(DO-214AC)



Suggested PAD Layout



Dimensions in inches and (millimeters)