

### Major ratings and characteristics

Characteristics	Values	Units	
I <sub>F(AV)</sub> Rectangular Waveform	3	Α	
$V_{RRM}$	40	V	
V <sub>F</sub> @ 3 A , Tj=125°C	0.44	V , typ.	
T <sub>J</sub> Operating Junction Temperature	-65 to +150	°C	

# DO-214AC ( SMA )



#### **Features**

- \* Low Forward Voltage Drop
- \* Reliable High Temperature Operation
- \* Softest, fast switching capability
- \* 150°C Operating Junction Temperature
- \* Lead Free Finish, RoHS Compliant



#### **Typical Applications**

Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications

#### Mechanical

\* Case: DO-214AC(SMA)

\* Molder Plastic: UL Flammability Classification Rating 94V-0

\* Device Weight: 0.002 ounces (0.064grams)

# Maximum Ratings Characteristics (T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol		Units
DC Blocking Voltage	$V_{RM}$		
Working Peak Reverse Voltage	$V_{RWM}$	40	Volts
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Average Rectified Forward Current		2	A
(Rated VR-20Khz Square Wave) - 50% duty cycle	I <sub>o</sub>	3	Amps
Peak Forward Surge Current - 1/2 60hz	I <sub>FSM</sub>	50	Amps
Peak Repetitive Reverse Surge Current (2uS-1Khz)	I <sub>RRM</sub>	&	Amps
Typical Thermal Resistance	Rθ <sub>JL</sub>	20	°C / W
Maximum Rate of Voltage Change ( at Rated $V_R$ )	dv/dt	10000	V/uS
Operating Junction Temperature	T <sub>J</sub>	- 65 to +150	°C
Storage Junction Temperature	T <sub>STG</sub>	- 65 to +150	

Electrical Characteristics - (per leg) $(T_A = 2$	25°C unless otherwise specified)
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Parameter	Test Co	nditions	Symbol	Тур.	Max.	Units
Instantaneous Forward Voltage	IF = 3 A	T <sub>J</sub> = 25°C		0.47	Volts	
Inistantaneous Forward Voltage	IF - 3 A	T <sub>J</sub> = 125°C	V <sub>F</sub>	0.44	0.45	VOILS
Instantaneous Reverse Current	At V <sub>RM</sub>	T <sub>J</sub> = 25°C	IR		500	uA
		T <sub>J</sub> = 125°C			25	mA

<sup>\*</sup> Pulse width < 300 uS, Duty cycle < 2%

# **Patings and Characteristics Curves**

#### ( $T_A = 25$ °C unless otherwise specified)

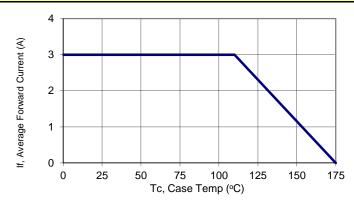


Figure 1: Current Derating, Case

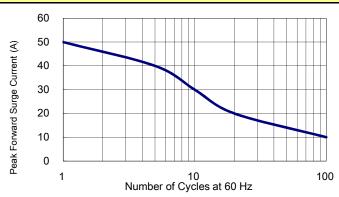


Figure 2: Maximum Repetitive Surge Current

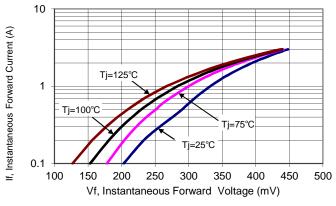


Figure 3: Typical Reverse Current

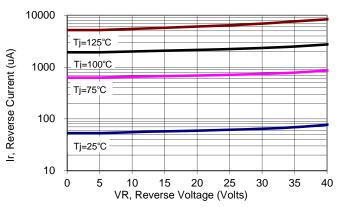


Figure 4: Typical Forward Voltage

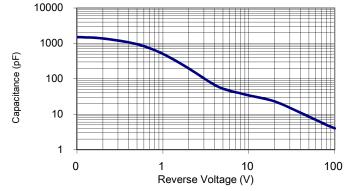
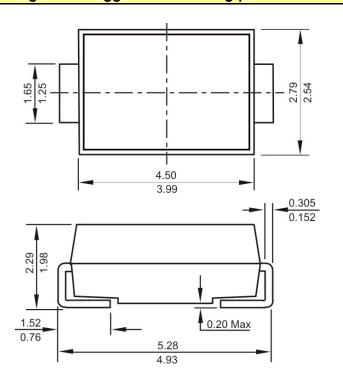


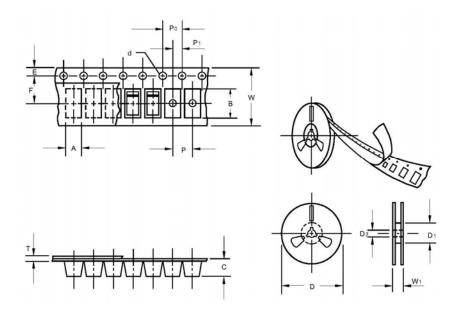
Figure 5: Typical Junction Capacitance

# Package and Suggested Mounting pad Outline Dimensions millimeters



# Mounting Pad Layout 1.88 Max. 1.52 Min. 5.28 Ref.

# **Packing and Ordering information**



Item	Symbol	Dimension
Carrier width	Α	2.79±0.15
Carrier length	В	5.33±0.15
Carrier depth	С	2.36±0.15
Sprocket hole	d	1.55±0.10
Reel outside diameter	D	330.0±1.0
Reel inner diameter	D1	75±1.0
Feed hole diameter	D2	13.5±1.0
Stocket hole position	Е	1.75±0.10
Punch hole position	F	5.5±0.05
Punch hole pitch	Р	4.0±0.10
Sprocket hole pitch	P0	4.0±0.10
Embossment center	P1	2.0±0.10
Totall tape thickness	Т	0.3±0.10
Tape width	W	12.0±0.15
Reel width	W1	18.1±1.5

# Ordering information

Part Number	Package	Base Quantity	Delivery mode
P3L40A	DO-214AC (SMA)	5000	13" diameter plastic tape and reel

Note: For Halogen Free molding compound, add "H" suffix to part number above.



# **Marking information**



P3L40A = Product Type Marking Code

A = Assembly code

YM = Date Code

Y = Last one digits of year

M = Month Code

H = Halogen Free (N/A = common molding compound)

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