

# **CYStech Electronics Corp.**

Spec. No.: C344LA Issued Date: 2004.05.07

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## 3.0Amp Silicon Rectifiers

# 1N540XLA Series

#### **Features**

- Low forward voltage drop.
- High reliability
- High current capability
- High surge current capability

#### **Mechanical Data**

Case : Molded plastic DO-201ADEpoxy : UL94V-0 rate flame retardant

• Terminals: Solderable per MIL-STD-202 method 208 guaranteed

• Polarity: Color band denotes cathode end.

• Mounting Position : Any.

• Weight: 1.1 gram

### **Maximum Ratings and Electrical Characteristics**

(Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%)

resistive of inductive load.	Symbol	Type							
Parameter		1N	1N	1N	1N	1N	1N	1N	Units
		5400	5401	5402	5404	5406	5407	5408	
Repetitive peak reverse voltage	Vrrm	50	100	200	400	600	800	1000	V
Maximum RMS voltage	Vrms	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VR	50	100	200	400	600	800	1000	V
Maximum instantaneous forward voltage, IF=3A	VF	0.95					V		
Maximum average forward rectified current, 0.375"(9.5mm) lead length at Ta=75°C	IF(AV)	3						A	
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	Ifsm	200						A	
Maximum DC reverse current, at rated DC blocking voltage $T_{J}=25^{\circ}C \qquad I_{R} \qquad \qquad 5$ $T_{J}=100^{\circ}C \qquad \qquad 50$							μΑ μΑ		
Typical thermal resistance(Note 1)	nermal resistance(Note 1) Rth, JA				30				°C/W
Typical junction capacitance (Note 2)	Сл	40					pF		
Storage temperature	Tstg	<b>-</b> 65 ∼ +175						$^{\circ}\!\mathbb{C}$	
Operating temperature	TJ	<b>-</b> 65 ∼ +175						$^{\circ}\!\mathbb{C}$	

Note: 1. Thermal resistance from junction to ambient, 0.375" (9.5mm) lead length.

2. Measured at 1MHz and applied reverse voltage of 4VDC.



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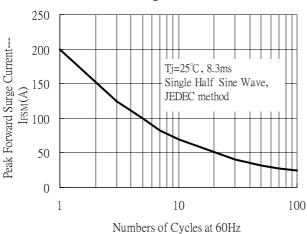
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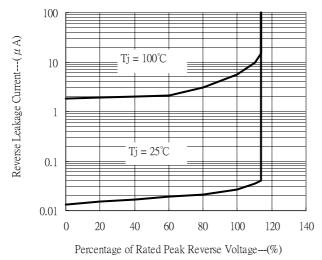
### **Characteristic Curves**

Forward Current Derating Curve 3.5 Average Forward Current---I O(A) 3 2.5 2 1.5 Single Phase, Half Wave 60Hz, Resistive 1 or Inductive Load 0.5 0 0 60 80 20 40 100 120 140 160 Ambient Temperature--- $TA(^{\circ}C)$ 

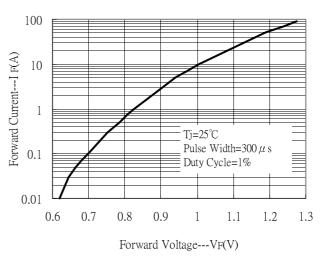
Maximum Non-Repetitive Forward Surge Current



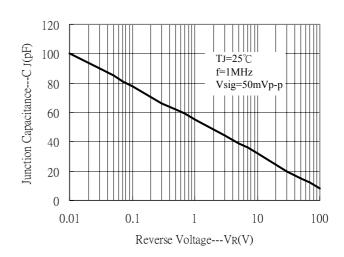
Reverse Leakage Current vs Reverse Voltage



Forward Current vs Forward Voltage



Junction Capacitance vs Reverse Voltage



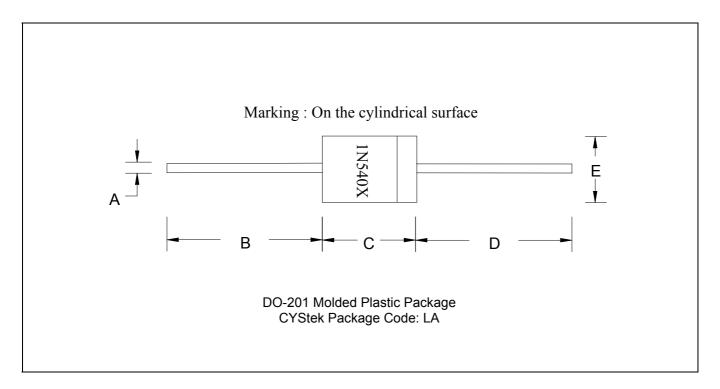


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#### **DO-201 Dimension**



#### \*:Typical

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DIM	Inches		Millimeters		DIM	Incl	hes	Millimeters	
	Min.	Max.	Min.	Max.	וווט	Min.	Max.	Min.	Max.
Α	0.0472	0.0520	1.20	1.30	D	1.0000	-	25.40	-
В	1.0000	-	25.40	-	Е	0.1890	0.2200	4.80	5.60
С	0.2835	0.3750	7.20	9.50					

Notes: 1.Controlling dimension: millimeters.

2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.

3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

#### Material:

- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed.
- Mold Compound : Epoxy resin family, flammability solid burning class: UL94V-0

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