

# ES1J-LTP Datasheet



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DiGi Electronics Part Number	ES1J-LTP-DG
Manufacturer	<a href="#">Micro Commercial Co</a>
Manufacturer Product Number	ES1J-LTP
Description	DIODE GEN PURP 600V 1A DO214AC
Detailed Description	Diode 600 V 1A Surface Mount DO-214AC (SMA)

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Tel: +00 852-30501935

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## Purchase and inquiry

Manufacturer Product Number:

ES1J-LTP

Series:

-

Technology:

Standard

Current - Average Rectified (Io):

1A

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Current - Reverse Leakage @ Vr:

5  $\mu$ A @ 600 V

Mounting Type:

Surface Mount

Supplier Device Package:

DO-214AC (SMA)

Base Product Number:

ES1J

Manufacturer:

Micro Commercial Co

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

600 V

Voltage - Forward (Vf) (Max) @ If:

1.7 V @ 1 A

Reverse Recovery Time (trr):

35 ns

Capacitance @ Vr, F:

15pF @ 4V, 1MHz

Package / Case:

DO-214AC, SMA

Operating Temperature - Junction:

-65°C ~ 175°C

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

## Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 2)

## Maximum Ratings

- Operating Junction Temperature Range: -65°C to +175°C
- Storage Temperature Range: -65°C to +175°C
- Maximum Thermal Resistance: 35°C/W Junction to Lead
- Maximum Thermal Resistance: 85°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
ES1A-L	ES1A	50V	35V	50V
ES1B-L	ES1B	100V	70V	100V
ES1D-L	ES1D	200V	140V	200V
ES1G-L	ES1G	400V	280V	400V
ES1J-L	ES1J	600V	420V	600V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

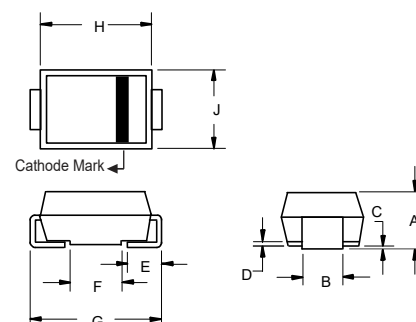
Average Forward Current	$I_{F(AV)}$	1.0A	$T_L=125^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage ES1A-L-ES1D-L ES1G-L ES1J-L	$V_F$	0.95V 1.25V 1.70V	$I_{FM}=1.0A;$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	1.0 $\mu\text{A}$ 80 $\mu\text{A}$	$T_J=25^\circ\text{C};$ $T_J=125^\circ\text{C}$
Maximum Reverse Recovery Time	$T_{RR}$	35ns	$I_F=0.5A; I_R=1.0A;$ $I_{rr}=0.25A$
Typical Junction Capacitance ES1A-L-ES1D-L ES1G-L ES1J-L	$C_J$	18pF 12pF 10pF	Measured at 1.0MHz $V_R=4.0V$

Note :1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7a.

2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

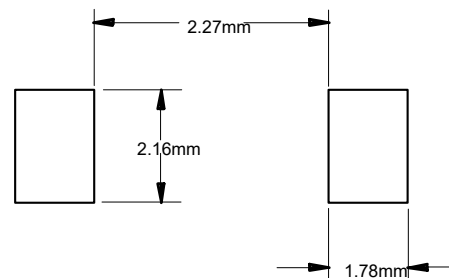
# 1 Amp Super Fast Recovery Rectifier 50 to 600 Volts

## SMA (DO-214AC)



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.075	0.096	1.90	2.44	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

## SUGGESTED SOLDER PAD LAYOUT



### Curve Characteristics

Fig. 1 - Forward Current Derating Curve

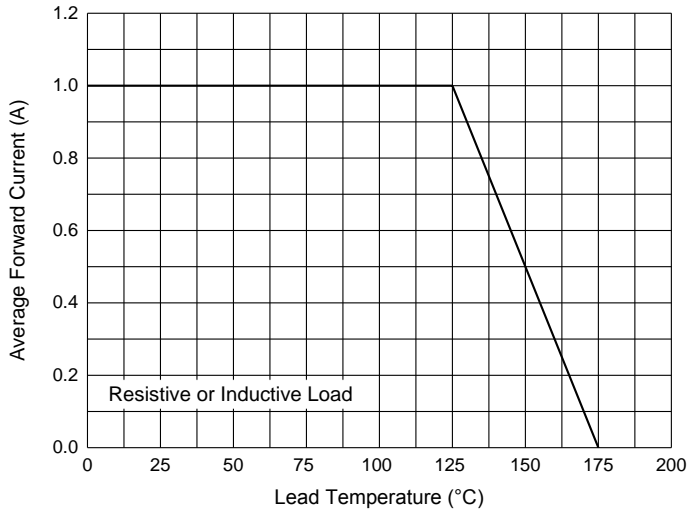


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

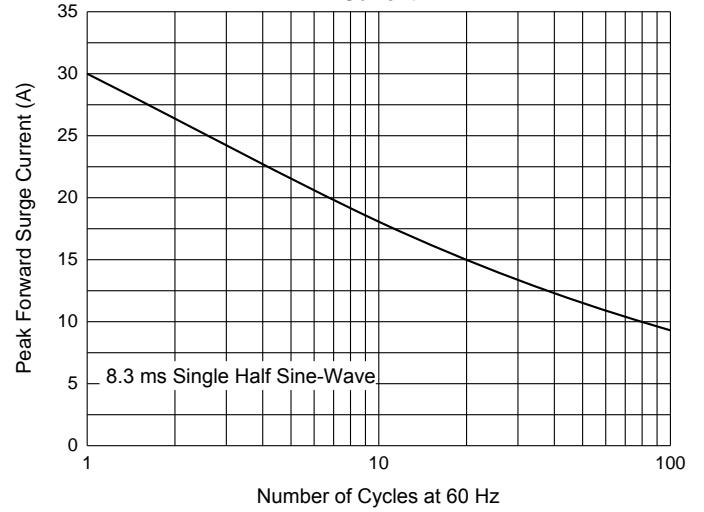


Fig. 3 - Typical Instantaneous Forward Characteristics

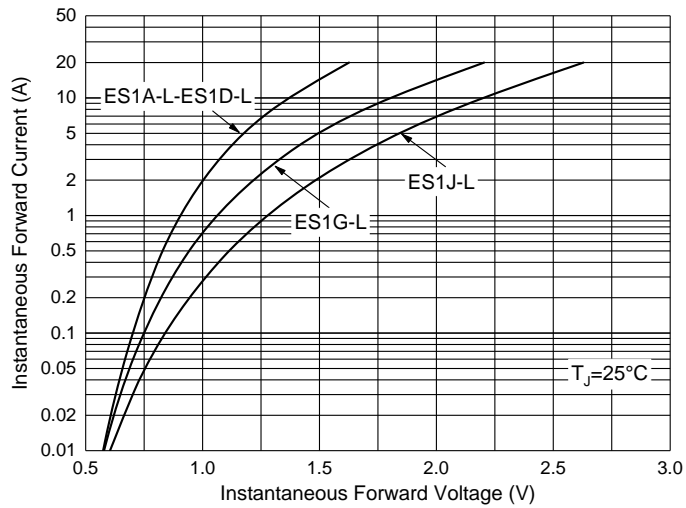
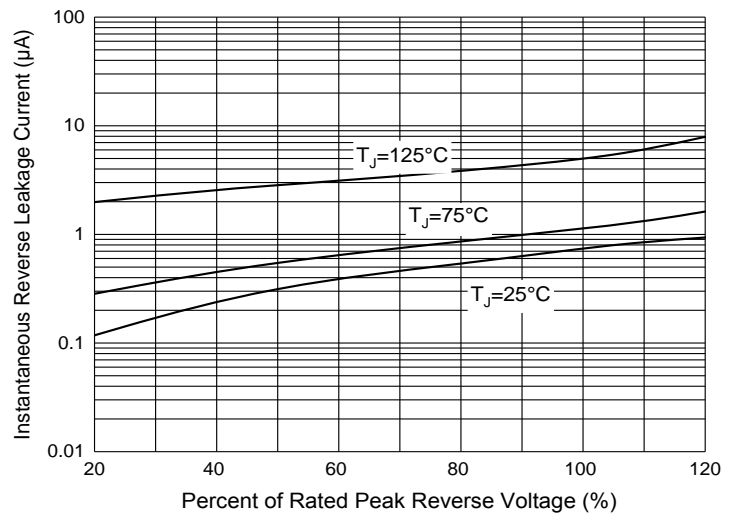


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
ES1A-LTP~ES1J-LTP	Tape&Reel: 5Kpcs/Reel

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