



Micro Commercial Components



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# ES1A-L THRU ES1J-L

## 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
- Built-in strain relief
- Super fast switching speed under 35ns
- Marking : Cathode band and type number (No '-L' Suffix)
- Halogen free available upon request by adding suffix "-HF"

## Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C

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

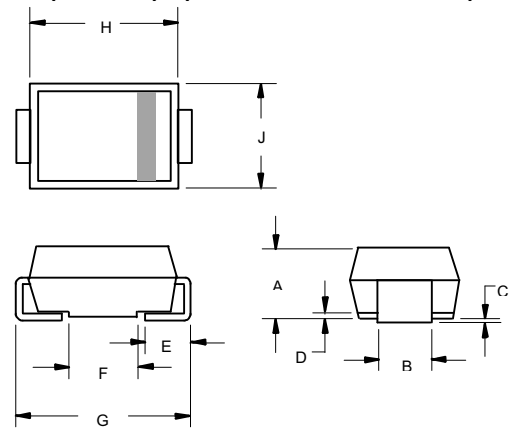
## Electrical Characteristics @ 25°C Unless Otherwise Specified

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	$V_F$	.95V 1.25V 1.70V	$I_{FM} = 1.0\text{A};$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5 $\mu\text{A}$ 80 $\mu\text{A}$	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$
Maximum Reverse Recovery Time	$T_{rr}$	35ns	$I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{rr} = 0.25\text{A}$
Typical Junction Capacitance	$C_J$	15pF	Measured at 1.0MHz, $V_R = 4.0\text{V}$

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

## 1 Amp Super Fast Recovery Rectifier 50 to 600 Volts

### DO-214AC (SMA) (LEAD FRAME)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.079	.096	2.00	2.44	
B	.050	.064	1.27	1.63	
C	.002	.008	.05	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.091	1.65	2.32	
G	.189	.220	4.80	5.59	
H	.157	.181	4.00	4.60	
J	.090	.115	2.25	2.92	

### SUGGESTED SOLDER PAD LAYOUT

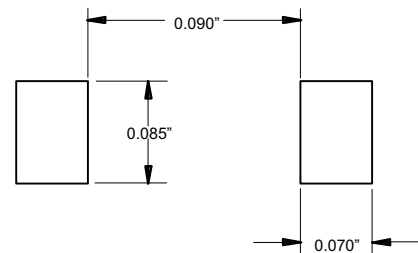


FIG.1-TYPICAL FORWARD CHARACTERISTICS

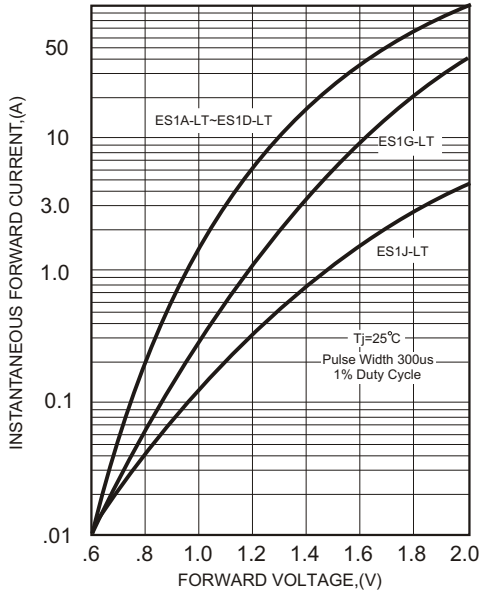


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

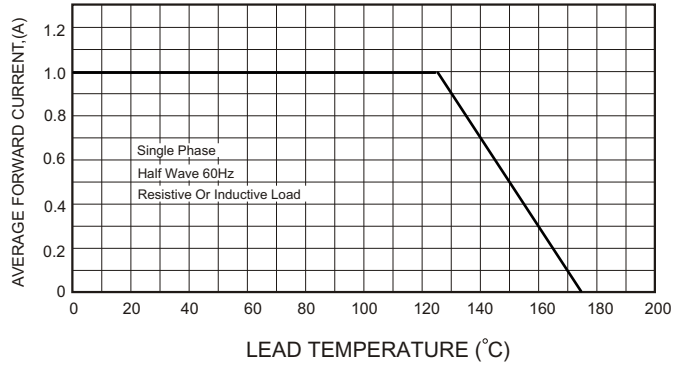
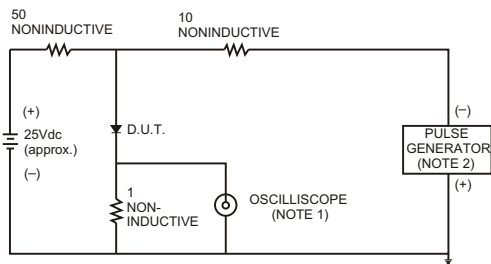


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

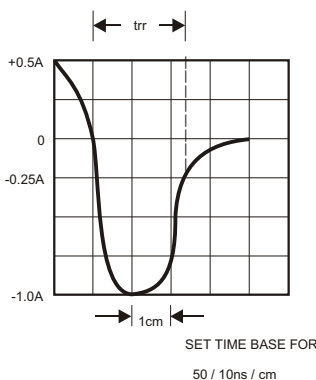


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

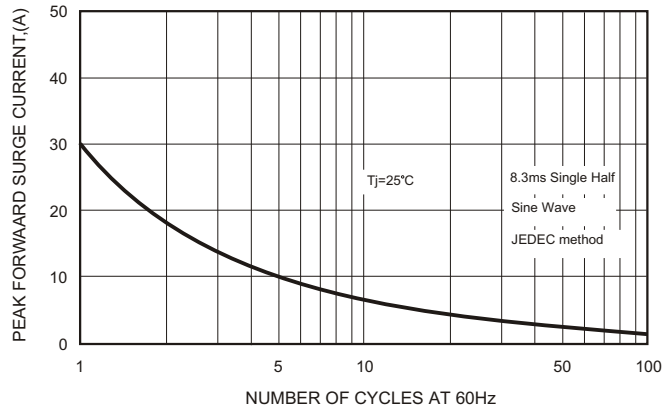
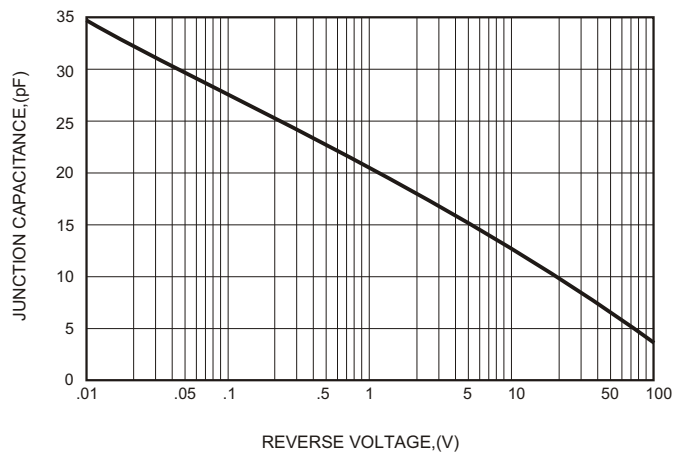


FIG.5-TYPICAL JUNCTION CAPACITANCE





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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 5Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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