



Micro Commercial Components



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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

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 '-LT' Suffix)

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 |

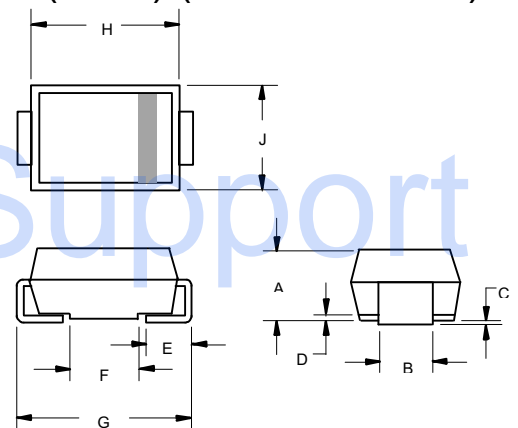
Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|--|-------------|-------------------------------------|---|
| Average Forward Current | $I_{F(AV)}$ | 1.0A | $T_A = 55^\circ\text{C}$ |
| 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 μA 80 μA | $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$ |
| 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

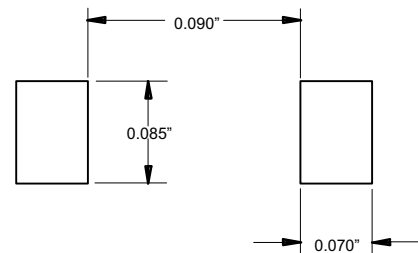


FIG.1-TYPICAL FORWARD CHARACTERISTICS

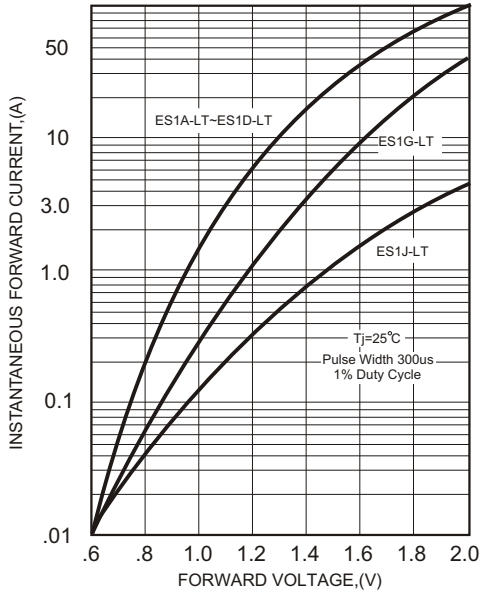


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

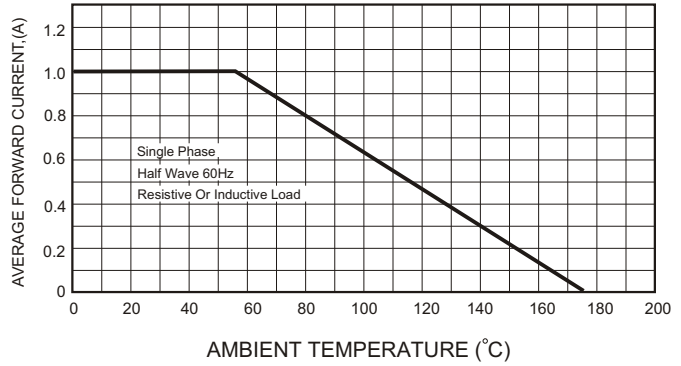
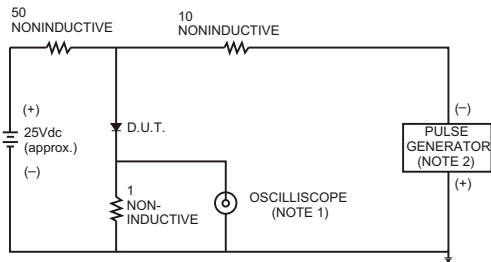


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

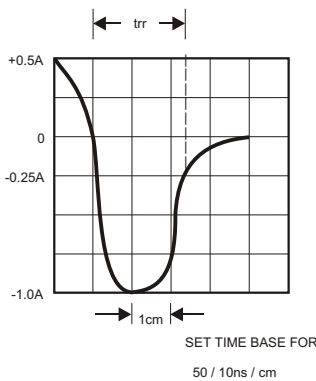


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

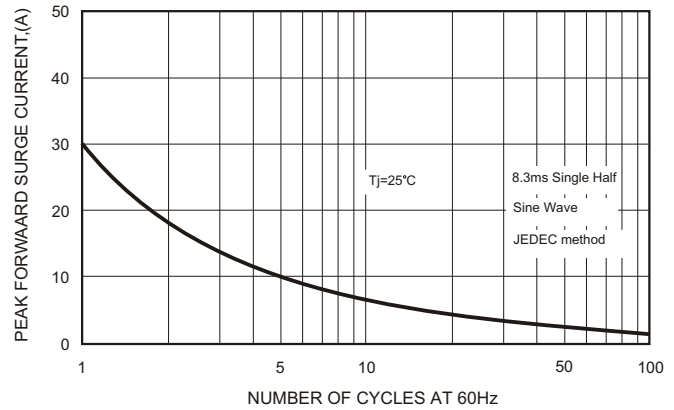
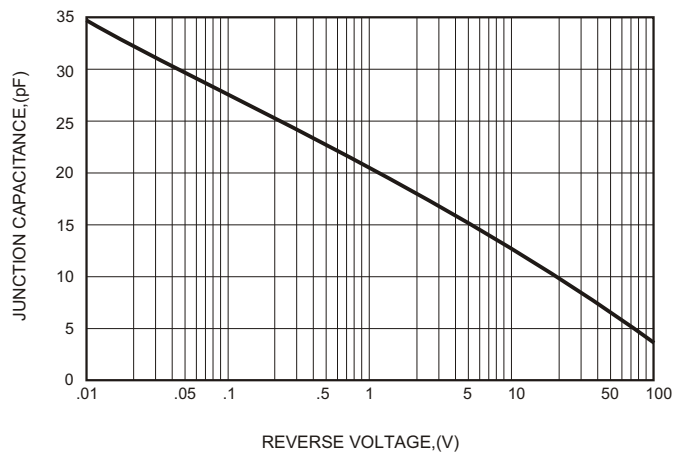


FIG.5-TYPICAL JUNCTION CAPACITANCE





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Ordering Information :

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

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