

# **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 Available Upon Request By Adding Suffix "-HF"

# 1 Amp Super Fast Recovery Rectifier 50 to 600 Volts

# **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

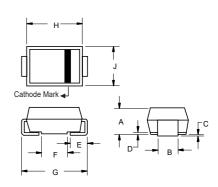
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
ES1A-L	ES1A	50V	35V	50V
ES1B-L	ES1B	100V	70V	100V
ES1D-L	ES1D	200V	140V	200V
ES1G-L	ES1G	400V	280V	400V
ES1J-L	ES1J	600V	420V	600V

# Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	I <sub>F(AV)</sub>	1.0A	T <sub>L</sub> =125°C
Peak Forward Surge Current	I <sub>FSM</sub>	30A	8.3ms,Half Sine
Maximum Instantaneous Forward Voltage ES1A-L-ES1D-L ES1G-L ES1J-L	V <sub>F</sub>	0.95V 1.25V 1.70V	I <sub>FM</sub> =1.0A;
Maximum DC Reverse Current At Rated DC Blocking Voltage	I <sub>R</sub>	1.0μA 80μA	T <sub>A</sub> =25°C; T <sub>A</sub> =100°C
Maximum Reverse Recovery Time	T <sub>RR</sub>	35ns	I <sub>F</sub> =0.5A; I <sub>R</sub> =1.0A; Irr=0.25A
Typical Junction Capacitance	CJ	15pF	Measured at 1.0MHz V <sub>R</sub> =4.0V

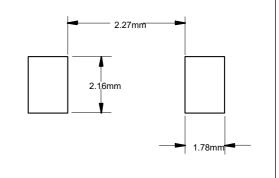
Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7a.

# SMA (DO-214AC)



DIMENSIONS						
DIM	INCHES		MM		NOTE	
	MIN	MAX	MIN	MAX	NOTE	
Α	0.079	0.096	2.00	2.44		
В	0.050	0.064	1.27	1.63		
С	0.002	0.008	0.051	0.203		
D		0.020		0.51		
Е	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		
Н	0.157	0.181	4.00	4.60		
J	0.090	0.115	2.25	2.92		

## SUGGESTED SOLDER PAD LAYOUT





# **Curve Characteristics**

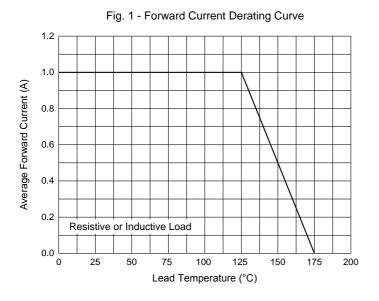


Fig. 3 - Typical Instantaneous Forward Characteristics 50 20 Instantaneous Forward Current (A) ES1A-L-ES1D-L 2 ES1G-L 0.2 0.05 T<sub>J</sub>=25°C 0.02 0.01 0.5 1.5 2.0 2.5 3.0 Instantaneous Forward Voltage (V)

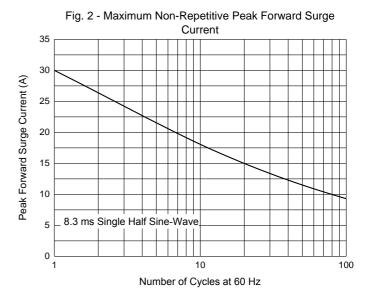
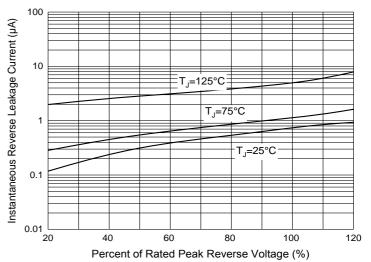


Fig. 4 - Typical Reverse Leakage Characteristics





# **Ordering Information**

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

Note: Adding "-HF" Suffix For Halogen Free, eg. ES1A-LTP- HF~ES1J-LTP-HF

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