Features

- Super Fast Reverse Recovery Time
- Glass Passivated Junction
- Low Profile Package
- Low Thermal Resistance
- Lead Free Finish/RoHS Compliant (Note 1)("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 2)
- Moisture Sensitivity Level 1

2 Amp Super Fast Recovery Rectifier 200 to 600 Volts

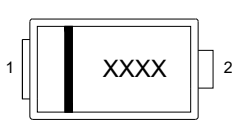
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value			Unit
		ES2DHL	ES2GHL	ES2JHL	
Peak Repetitive Reverse Voltage	V_{RRM}	200	400	600	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
RMS Reverse Voltage	V_{RMS}	140	280	420	V
Average Rectified Forward Current @ T_L=85°C	$I_{F(AV)}$	2			A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	50			A
Current Squared Time @1ms≤t≤8.3ms	I^2t	10.375			A^2s

Marking code

Part Number	Marking code
ES2DHL	ES2D
ES2GHL	ES2G
ES2JHL	ES2J

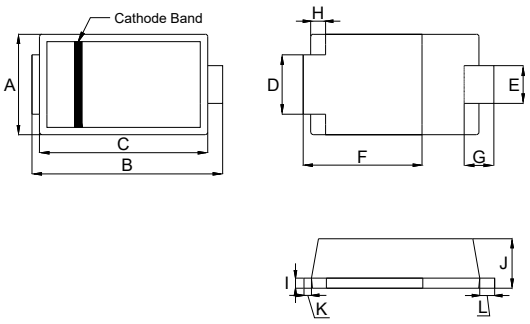
Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	Cathode	 XXXX = Marking code	
2	Anode		

Note:

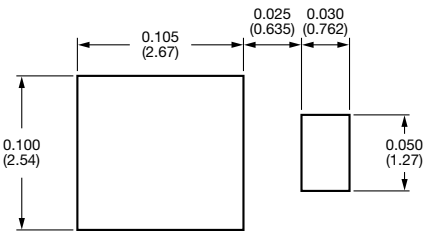
1. High temperature solder exemption applied, see EU directive annex 7a.
2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

SOD-123HL



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.074	0.086	1.88	2.18	
B	0.146	0.157	3.70	4.00	
C	0.041	0.053	3.19	3.61	
D	0.024	0.036	1.05	1.35	
E	0.087	0.102	0.61	0.91	
F	0.016	0.031	2.20	2.60	
G	0.012	0.000	0.40	0.80	
H	0.012		0.30		REF
I	0.004	0.012	0.10	0.30	
J	0.033	0.045	0.85	1.15	
K	0.000	0.012	0.00	0.30	
L	0.006	0.018	0.15	0.45	

Suggested Solder Pad Layout



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$Rth_{(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		20		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		80		°C/W

Note:
1.Mounted on P.C.B. with 5mm*5mm copper pad areas, $Rth_{(J-L)}$ is measured at the terminal of cathode band.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage ES2DHL ES2GHL ES2JHL	V_F	I_F=2A;T_J=25°C			0.95 1.30 1.70	V
Reverse Current	I_R	at Rated V_R;T_J=25°C at Rated V_R;T_J=125°C			5 100	μA
Reverse Recovery Time	t_{rr}	I_F=0.5A; I_R=1.0A; I_{rr}=0.25A;T_J=25°C			35	nS
Junction Capacitance ES2DHL ES2GHL ES2JHL	C_J	V_R=4V;f=1MHz;T_J=25°C		30 18 12		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

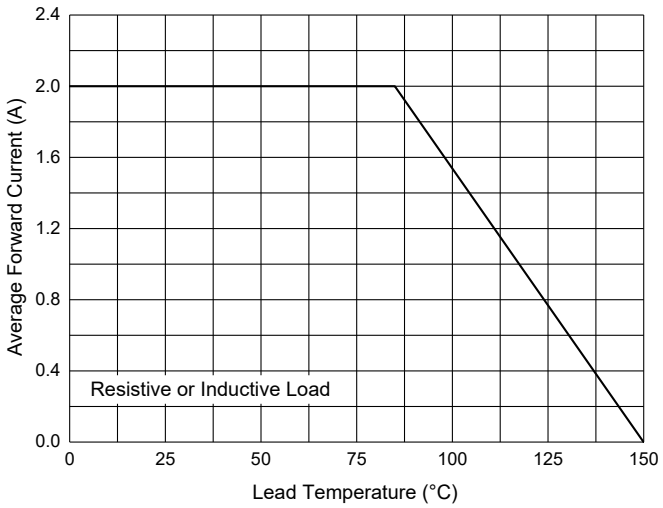


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

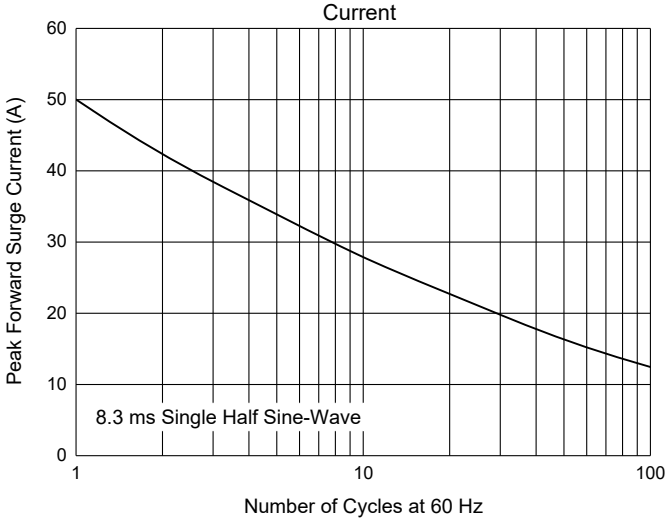


Fig. 3 - Typical Forward Characteristics

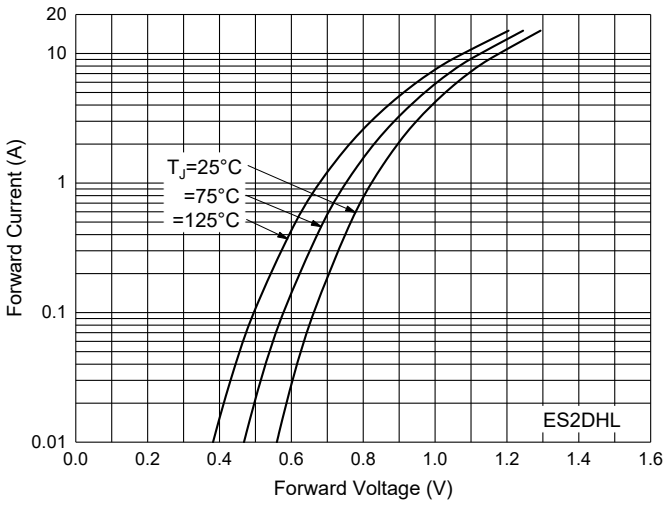


Fig. 4 - Typical Forward Characteristics

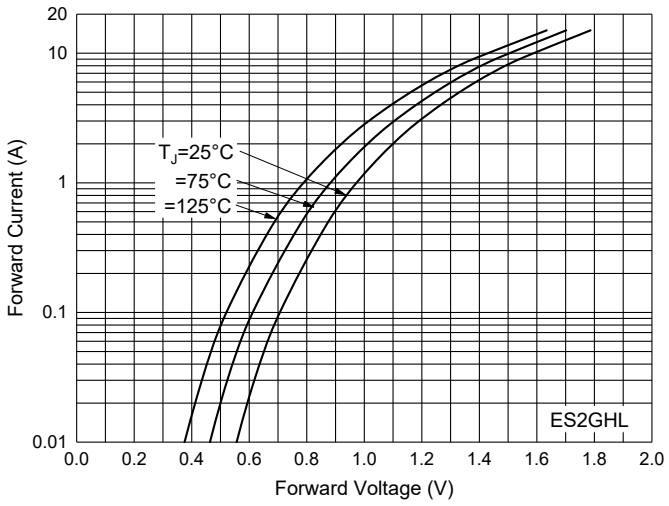


Fig. 5 - Typical Forward Characteristics

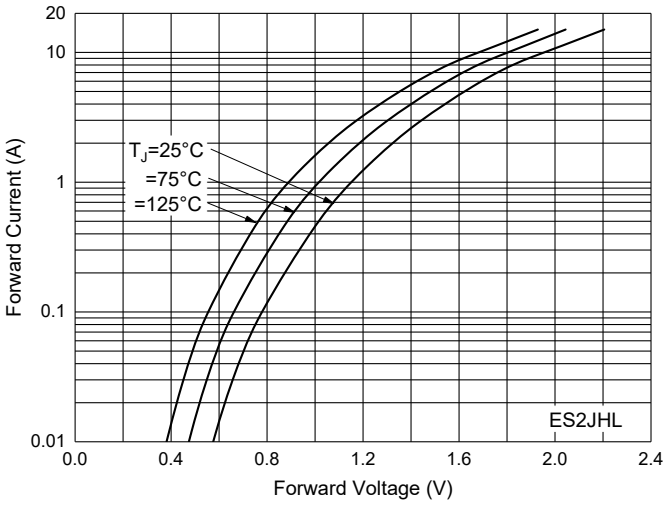
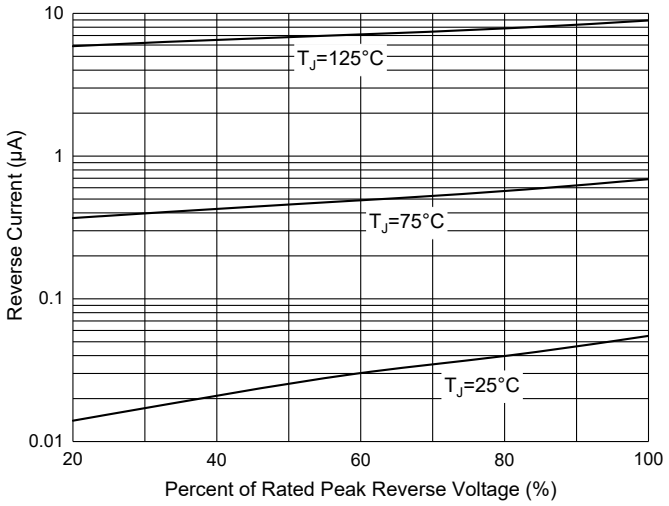
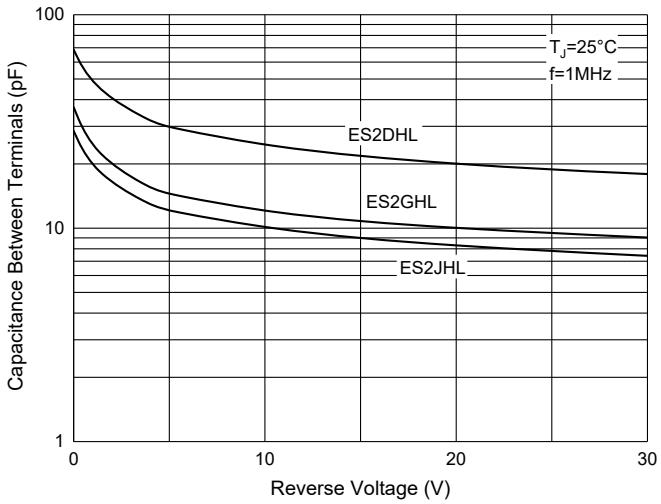


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:2.5Kpcs/Reel