

## Features

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

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value							Unit
		ES 2AFL	ES 2BFL	ES 2CFL	ES 2DFL	ES 2GFL	ES 2JFL	ES 2KFL	
Peak Repetitive Reverse Voltage	$V_{RRM}$								V
Working Peak Reverse Voltage	$V_{RWM}$	50	100	150	200	400	600	800	
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{RMS}$	35	70	105	140	480	420	560	V
Average Rectified Forward Current @ $T_L=65^\circ\text{C}$	$I_{F(AV)}$	2							A
Non-Repetitive Peak Surge Current @8.3ms Half Sine Wave	$I_{FSM}$	50							A
Non-Repetitive Peak Surge Current @1ms Half Sine Wave		100							
Current Squared Time @1ms $\leq t \leq$ 8.3ms	$I^2t$	10.375							A <sup>2</sup> s

## Marking code

Part Number	Marking code
ES2AFL	ES2A
ES2BFL	ES2B
ES2CFL	ES2C
ES2DFL	ES2D
ES2GFL	ES2G
ES2JFL	ES2J
ES2KFL	ES2K

## Internal Structure

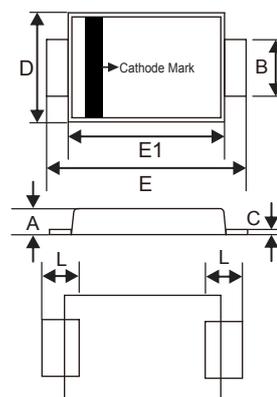
Pin	Description	Simplified outline	Graphic symbol
1	Cathode	<p>XXXX = Marking code</p>	
2	Anode		

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

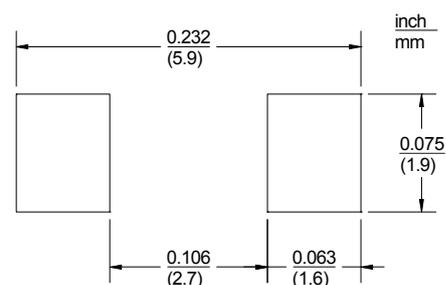
# 2 Amp Super Fast Recovery Rectifier 50 to 800 Volts

## DO-221AC(SMA-FL)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.035	0.049	0.90	1.25	
B	0.049	0.065	1.25	1.65	
C	0.004	0.016	0.10	0.40	
D	0.089	0.116	2.25	2.95	
E	0.173	0.220	4.40	5.60	
E1	0.126	0.181	3.20	4.60	
L	0.020	0.059	0.50	1.50	

## 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
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		25		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		75		°C/W

Note:

1. Mounted on P.C.B. with 8mm\*8mm copper pad areas.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage ES2AFL~ES2DFL ES2GFL ES2JFL ES2KFL	$V_F$	$I_F=2A; T_J=25^\circ C$			1.00 1.30 1.70 1.85	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			5 100	uA
Reverse Recovery Time	$t_{rr}$	$I_F=0.5A; I_R=1.0A;$ $I_{rr}=0.25A; T_J=25^\circ C$			35	ns
Junction Capacitance ES2AFL~ES2DFL ES2GFL ES2JFL~ES2KFL	$C_J$	$V_R=4V; f=1MHz; T_J=25^\circ C$		31 17 12		pF

**Curve Characteristics**

Fig. 1 - Forward Current Derating Curve

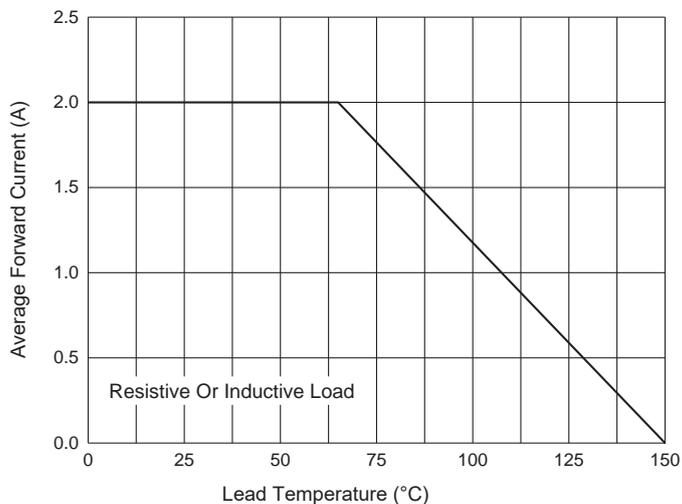


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

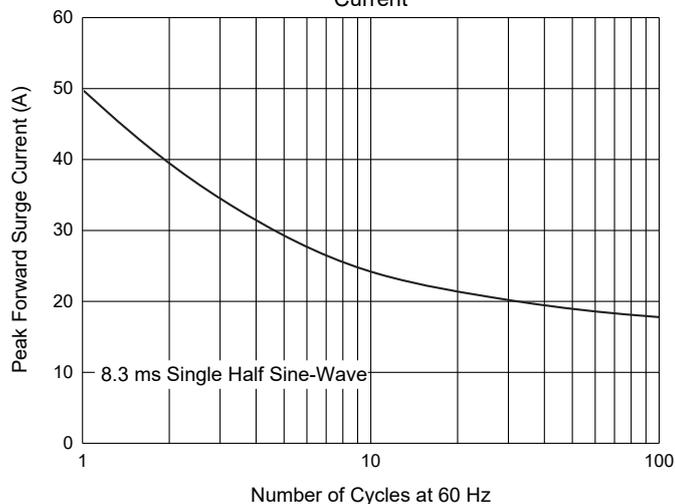


Fig. 3 - Typical Forward Characteristics

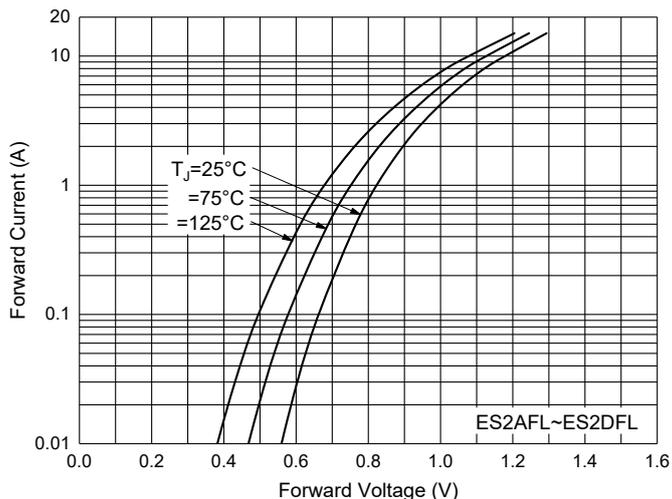


Fig. 4 - Typical Forward Characteristics

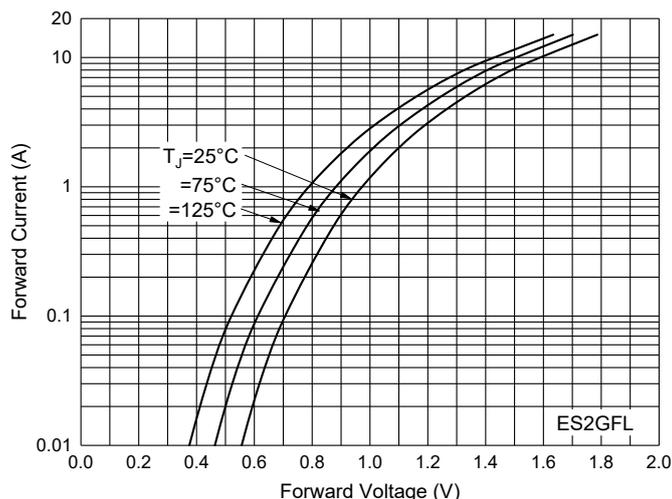


Fig. 5 - Typical Forward Characteristics

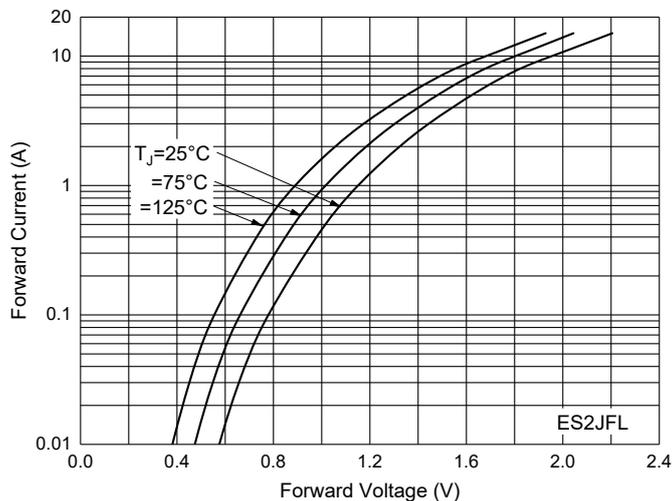
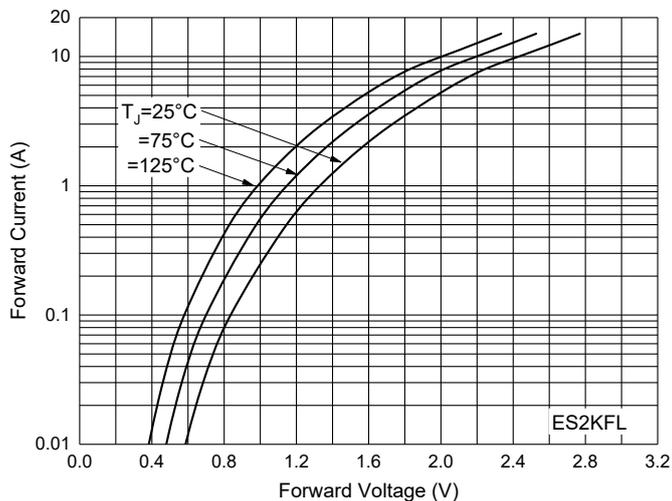


Fig. 6 - Typical Forward Characteristics



**Curve Characteristics**

Fig. 7 - Typical Reverse Leakage Characteristics

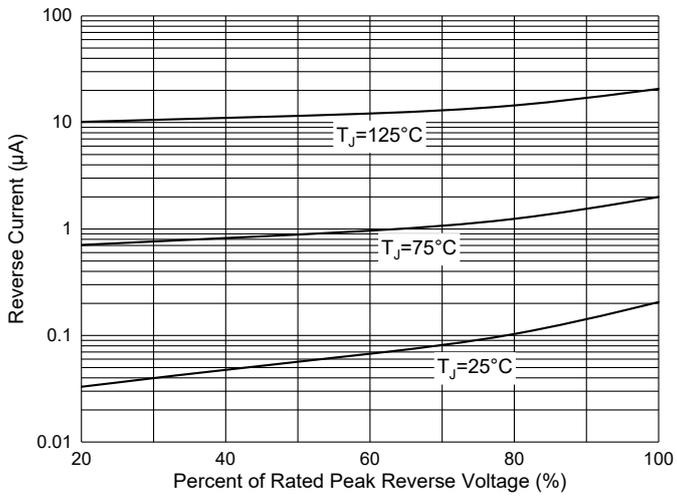
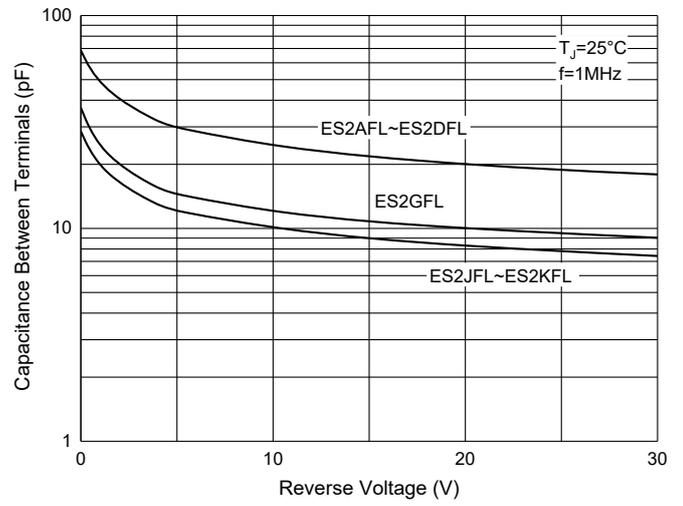


Fig. 8 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:10Kpcs/Reel

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