

# ES2DA-ES2JA(LS)

## SURFACE MOUNT SUPER FAST RECTIFIERS

### FEATURES

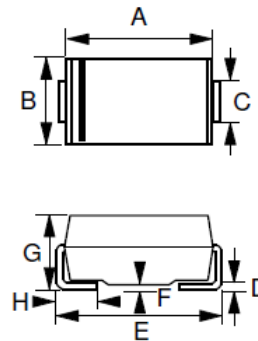
- Glass passivated chip
- Super fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Available in "Green" Package: SMA
  - Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
  - Halogen and Antimony Free. "Green" Device (Note 3)

### MECHANICAL DATA

- Case :molded plastic
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free"
- Polarity: Indicated by cathode band
- Weight: 0.07grams(Approximate)
- Moisture Sensitivity: Level 1 per J-STD-020C

## REVERSE VOLTAGE – 200 to 600 Volts FORWARD CURRENT – 2.0 Ampere

### SMA



SMA		
DIM	MIN	MAX
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	2.01	2.40
H	0.76	1.52
All dimension in millimeter		

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	ES2DA	ES2GA	ES2JA	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	400	600	V
Maximum DC blocking voltage	$V_{DC}$	200	400	600	V
Maximum average forward rectified current @ $T_L=110^\circ\text{C}$	$I_{(AV)}$	2.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	$I_{FSM}$	50			A
Operation and storage temperature range	$T_J, T_{STG}$	-55 to +150			°C
Typical thermal resistance (Note 6)	$R_{thJL}$	20		25	°C/W

## STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	MAX.			UNIT
Forward voltage (Note 4)	$I_F=2\text{A}$	$T_J=25^\circ\text{C}$	$V_F$	0.92	1.25	1.30	V
Maximum DC Reverse current at Rated DC Blocking voltage		$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	$I_R$	5.0 200			uA
Typical junction capacitance (Note 5)			$C_T$	25			pF

## DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MAX.			UNIT
Reverse recovery time	$I_F=0.5\text{A}, I_{rr}=0.25\text{A}, I_R=1.0\text{A}$	$t_{rr}$	25		35	ns

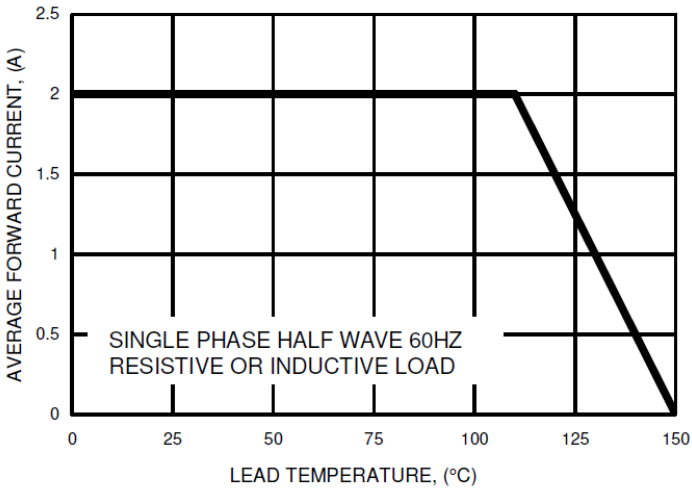
### Note :

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. 300us pulse width, 2% duty cycle.
5. Measured at 1.0MHz and applied reverse voltage of 4.0 VDC
6. Thermal Resistance Junction to Lead

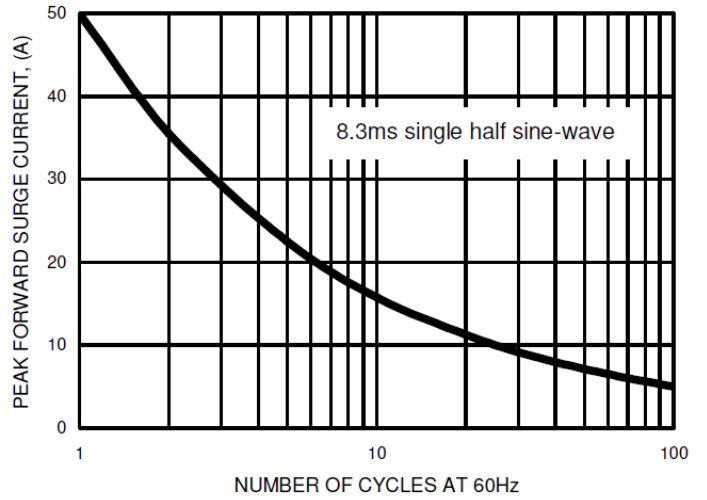
REV-10, Oct-2021, KSGA02

**RATING AND CHARACTERISTIC CURVES**  
**ES2DA-ES2JA(LS)**

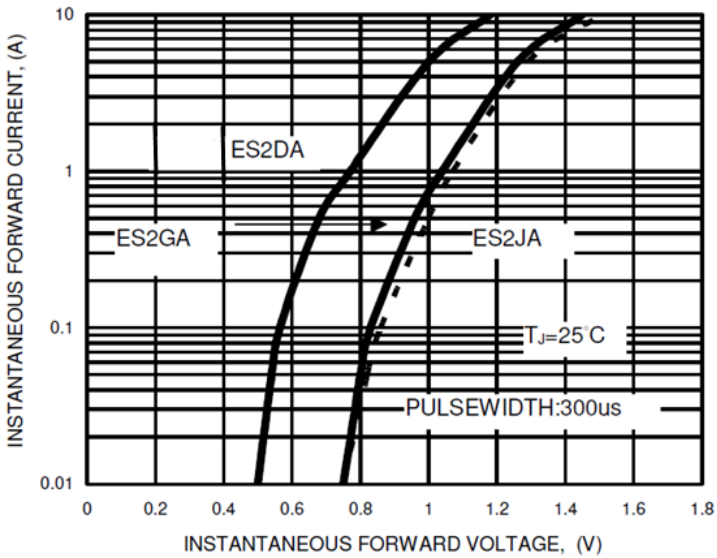
**FIG.1- FORWARD CURRENT DERATING CURVE**



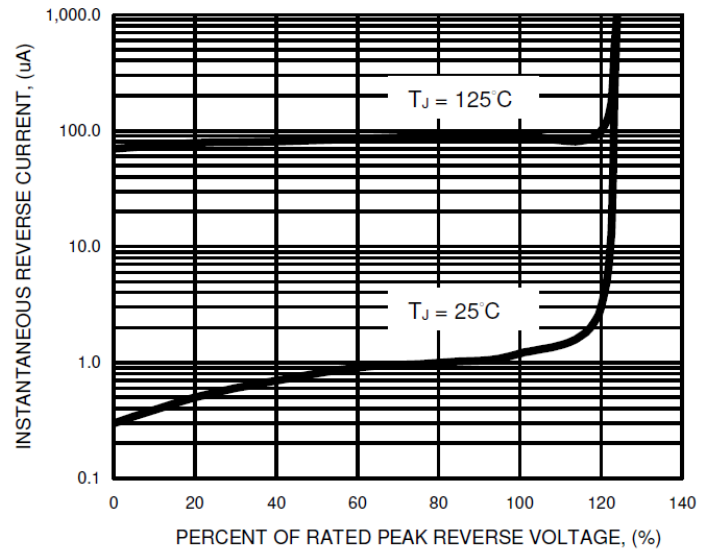
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



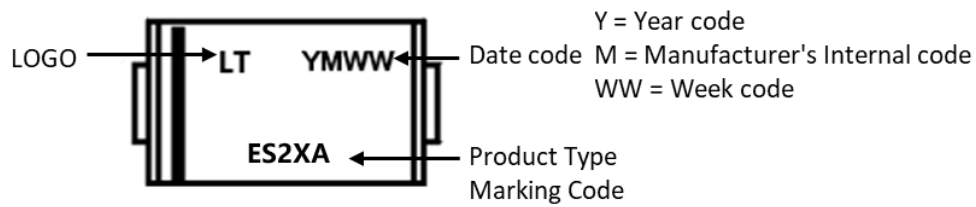
**FIG.4- TYPICAL REVERSE CHARACTERISTICS**



## Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
ES2DA_HF	SMA	5000	Reel
ES2DA_HF-07	SMA	1500	Reel
ES2GA_HF	SMA	5000	Reel
ES2JA_HF	SMA	5000	Reel

## Marking Information:



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