



## ESH2BA - ESH2DA

### 1.0AMPS Surface Mount Super Fast Rectifiers

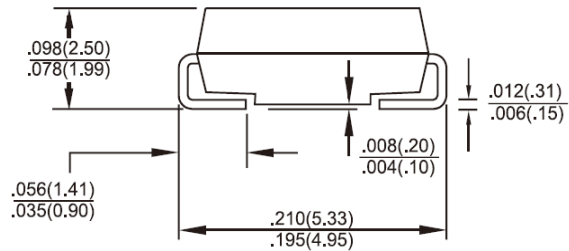
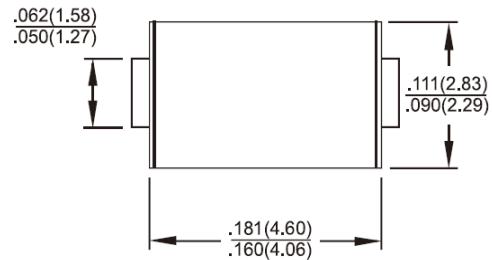
#### SMA/DO-214AC

### Features

- ✧ Glass passivated junction chip
- ✧ For surface mounted application
- ✧ Low profile package
- ✧ Built-in strain relief
- ✧ Ideal for automated placement
- ✧ Easy pick and place
- ✧ Super fast recovery time for high efficiency
- ✧ Qualified as per AEC-Q101
- ✧ High temperature soldering:  
260°C/10 seconds at terminals
- ✧ Plastic material used carries Underwriters  
Laboratory Classification 94V-0
- ✧ Green compound with suffix "G" on packing  
code & prefix "G" on datecode

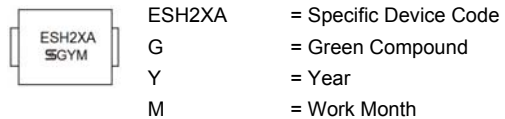
### Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.067 grams



### Dimensions in inches and (millimeters)

#### Marking Diagram



### Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	ESH2BA	ESH2CA	ESH2DA	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	100	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load	$I_{FSM}$	50			A
Maximum Instantaneous Forward Voltage (Note 1) @ 1 A	$V_F$	0.90			V
Maximum Reverse Current @ Rated VR $T_A=25\text{ }^\circ\text{C}$ $T_A=125\text{ }^\circ\text{C}$	$I_R$	1 50			$\mu\text{A}$
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	25			nS
Typical Junction Capacitance (Note 3)	$C_j$	25			pF
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	75 20			$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	- 55 to + 175			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 55 to + 175			$^\circ\text{C}$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (ESH2BA THRU ESH2DA)

FIG. 1 FORWARD CURRENT DERATING CURVE

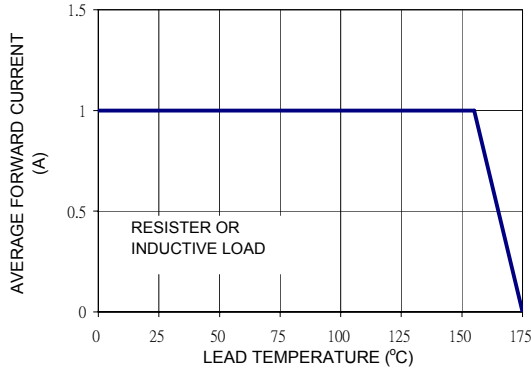


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

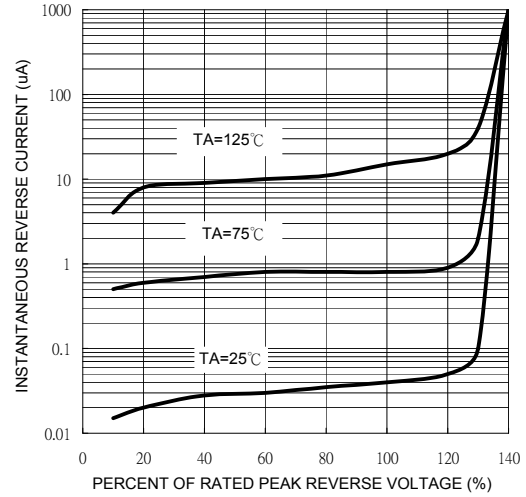


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

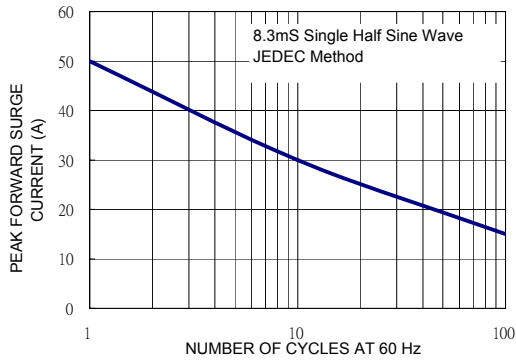


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

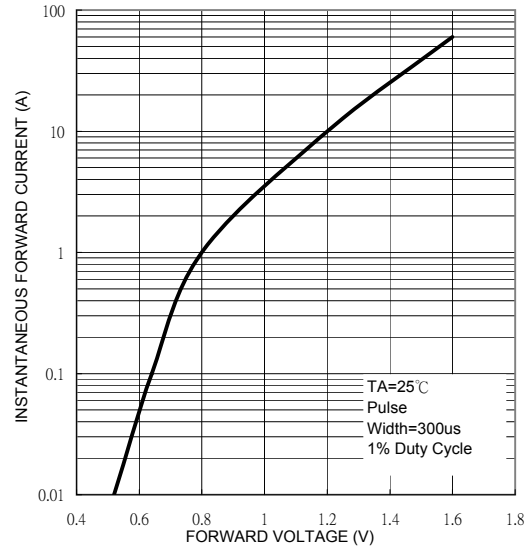


FIG. 4 TYPICAL JUNCTION CAPACITANCE

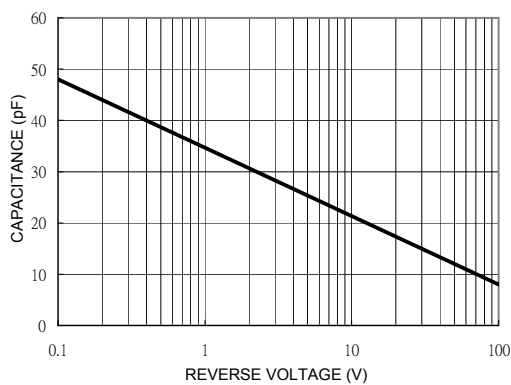


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

