



SYNSEMI SEMICONDUCTOR

ES2AA thru ES2MA

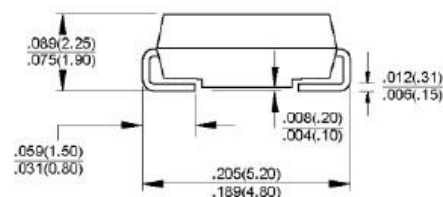
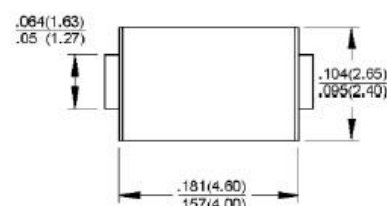
2.0 Amps. Super Fast Surface Mount Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 2.0 Amperes

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
- ◆ Plastic material has UL flammability classification 94V-0



DO-214AC (SMA)



Dimensions in inches and (millimeters)

Mechanical Data

- ◆ Case : Molded plastic
- ◆ Polarity : Indicated by cathode band
- ◆ Weight : 0.002 ounce, 0.064 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

Parameter	Symbols	ES 2AA	ES 2BA	ES 2CA	ES 2DA	ES 2FA	ES 2GA	ES 2JA	ES 2KA	ES 2MA	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	800	1000	Volts
Maximum average forward rectified current @ $T_L=110^{\circ}\text{C}$	$I_{(AO)}$	2.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0									Amps
Maximum instantaneous forward voltage @ 2.0A DC	V_F	0.92				1.25		1.7			Volts
Maximum DC reverse current at rated DC blocking voltage @ $T_J=25^{\circ}\text{C}$ @ $T_J=125^{\circ}\text{C}$	I_R	5.0 350									μA μA
Maximum reverse recovery time (Note 1)	t_r	25									nS
Typical junction capacitance (Note 2)	C_j	25									pF
Typical thermal resistance (Note 3)	$R_{\theta JL}$	20									$^{\circ}\text{C/W}$
Operating temperature range	T_J	-55 to +150									$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150									$^{\circ}\text{C}$

- Notes:**
1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Thermal Resistance junction to Lead.

ES2AA thru ES2MA

RATINGS AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

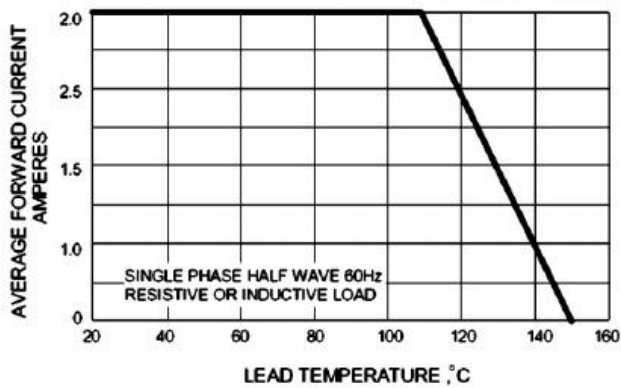


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

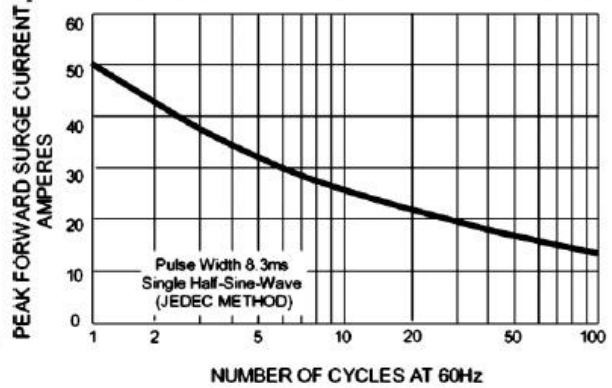


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

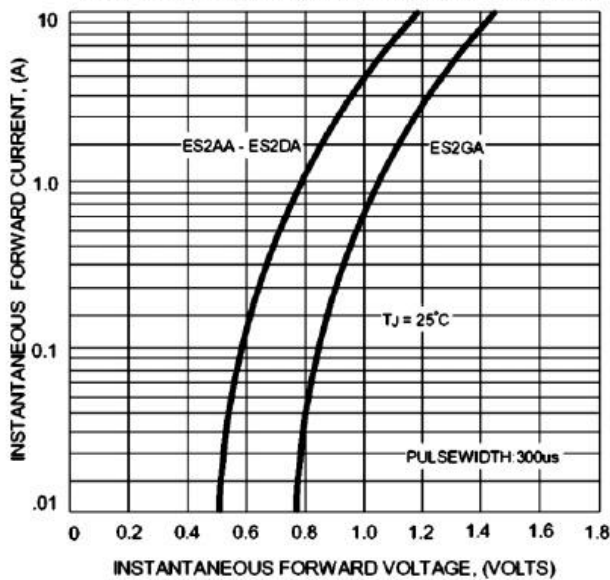


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

