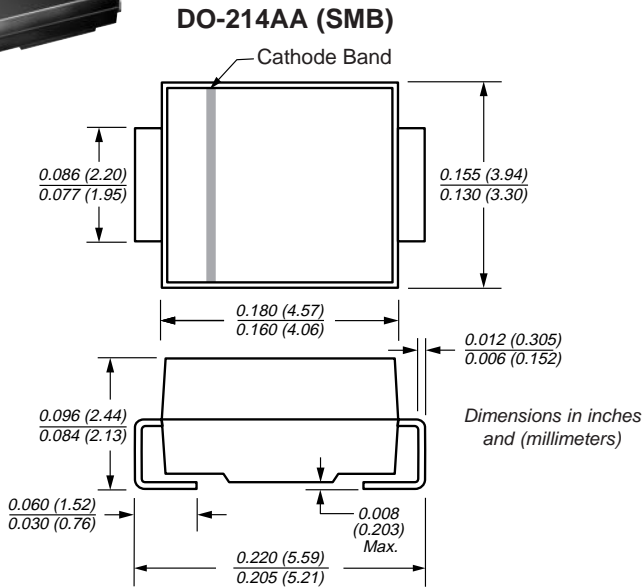


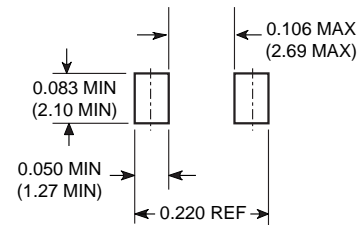


Surface Mount Ultrafast Plastic Rectifiers

Reverse Voltage 50 to 200 V
Forward Current 2.0 A
Reverse Recovery Time 20 ns



Mounting Pad Layout



Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultrafast recovery time for high efficiency
- Excellent high temperature switching
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10 seconds, at terminals

Mechanical Data

Case: JEDEC DO-214AA molded plastic body

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.003 oz., 0.093 g

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	ES2A	ES2B	ES2C	ES2D	Unit
Device marking code		EA	EB	EC	ED	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	V
Maximum average forward rectified current at T _L = 110°C	I _{F(AV)}	2.0				A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T _L = 110°C	I _{FSM}	50				A
Maximum thermal resistance ⁽¹⁾	R _{θJA} R _{θJL}	75 20				°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150				°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 2.0A ⁽²⁾	V _F	0.90				V
Maximum DC reverse current at rated DC blocking voltage	I _R	10 350				μA
Max. reverse recovery time I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	20				ns
Maximum reverse recovery time I _F = 2.0A, V _R = 30V, di/dt = 50A/μs, I _r = 10% I _{RM}	t _{rr}	30 50				ns
Maximum stored charge I _F = 2.0A, V _R = 30V, di/dt = 50A/μs, I _r = 10% I _{RM}	Q _{rr}	10 25				nC
Typical junction capacitance at 4.0V, 1MHz	C _J	18				pF

Notes: (1) Units mounted on P.C.B. 5.0 x 5.0mm (0.013mm thick) land areas

(2) Pulse test: 300μs pulse width, 1% duty cycle

ES2A thru ES2D

Vishay Semiconductors
formerly General Semiconductor



Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Maximum Forward Current Derating Curve

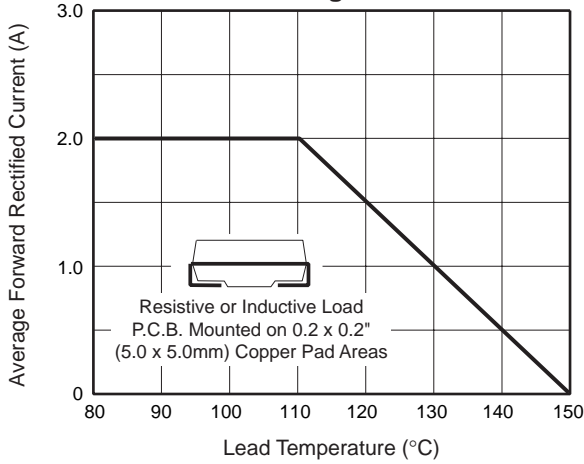


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

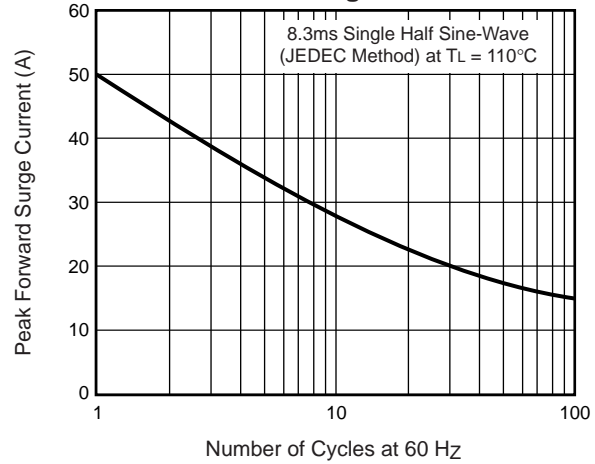


Fig. 3 – Typical Instantaneous Forward Characteristics

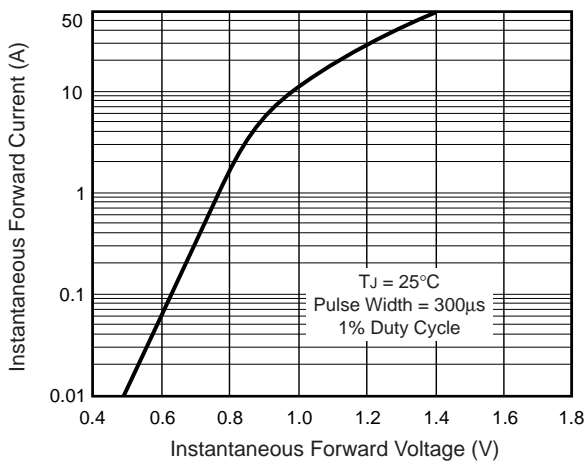


Fig. 4 – Typical Reverse Leakage Characteristics

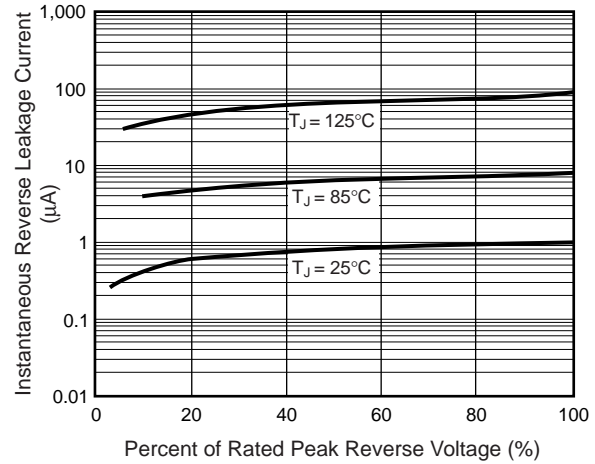


Fig. 5 – Typical Junction Capacitance

