

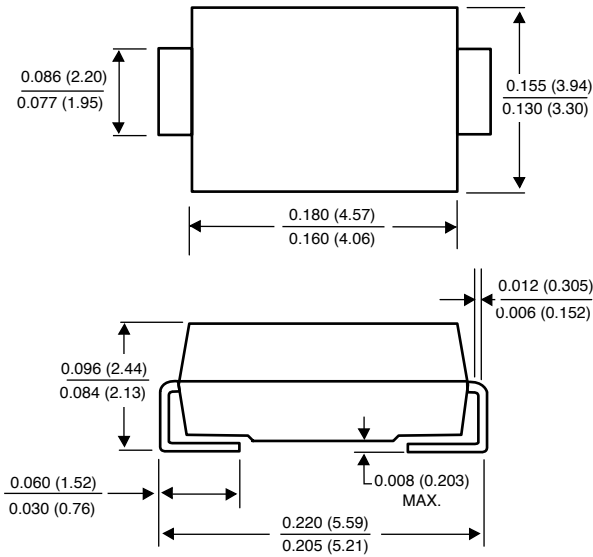
ES2A THRU ES2D

SURFACE MOUNT FAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts

Forward Current - 2.0 Amperes

DO-214AA



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mount applications
- ◆ Low profile package
- ◆ Built-in strain relief
- ◆ Ideal for automated placement
- ◆ Easy pick and place
- ◆ Glass passivated chip junction
- ◆ Superfast recovery times for high efficiency
- ◆ Low power loss, high efficiency
- ◆ High temperature soldering: 250°C/10 seconds at terminals



MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic body over passivated chip

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

Polarity: Color band denotes cathode end

Weight: 0.003 ounces, 0.093 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	ES2A	ES2B	ES2C	ES2D	UNITS
Device marking code		EA	EB	EC	ED	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	Volts
Maximum RMS voltage	V _{RMS}	35	70	105	140	Volts
Maximum DC blocking voltage	V _{DC}	50	100	150	200	Volts
Maximum average forward rectified current at T _L =110°C	I _(AV)	2.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T _L =110°C	I _{FSM}	50.0				Amps
Maximum instantaneous forward voltage at 2.0A	V _F	0.90				Volts
Maximum DC reverse current at rated DC blocking voltage	I _R	10.0 350				μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	20.0				ns
Maximum reverse recovery time (NOTE 2)	t _{rr}	30.0 50.0				ns
Maximum stored charge (NOTE 2)	Q _{rr}	10.0 25.0				nC
Typical junction capacitance (NOTE 3)	C _J	18.0				pF
Maximum thermal resistance (NOTE 4)	R _{θJA} R _{θJL}	75.0 20.0				°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150				°C

NOTES:

- (1) Reverse recovery test conditions: I_F=0.5A, I_R= 1.0A, I_{rr}=0.25A
- (2) T_{rr} and Q_{rr} measured at: I_F=2.0A, V_R=30V, di/dt=50A/μs, I_{rr}=10% I_F
- (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (4) Units mounted on P.C.B. 5.0 x 5.0mm (0.013mm thick) land areas

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GENERAL
SEMICONDUCTOR®

RATING AND CHARACTERISTIC CURVES ES2A THRU ES2D

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

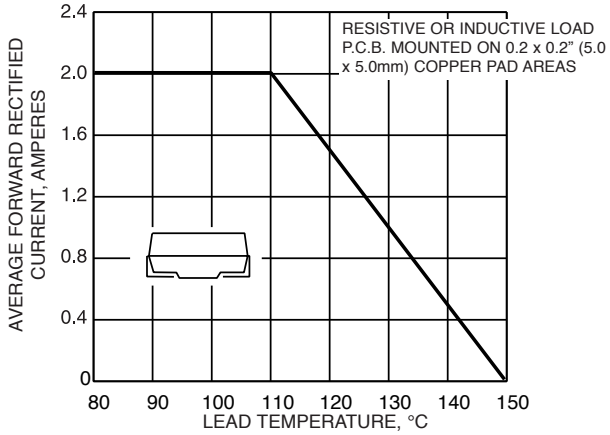


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

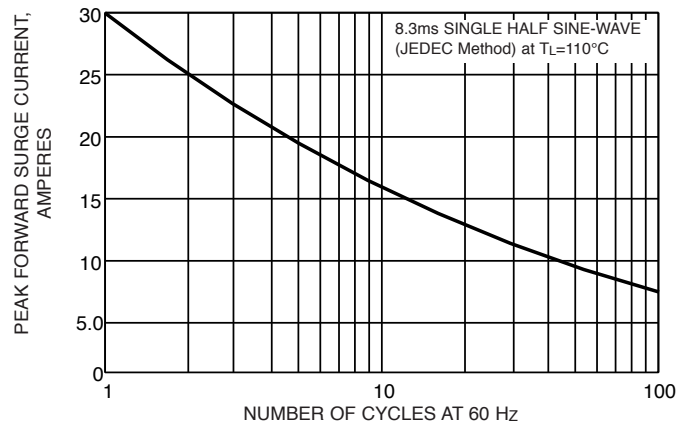


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

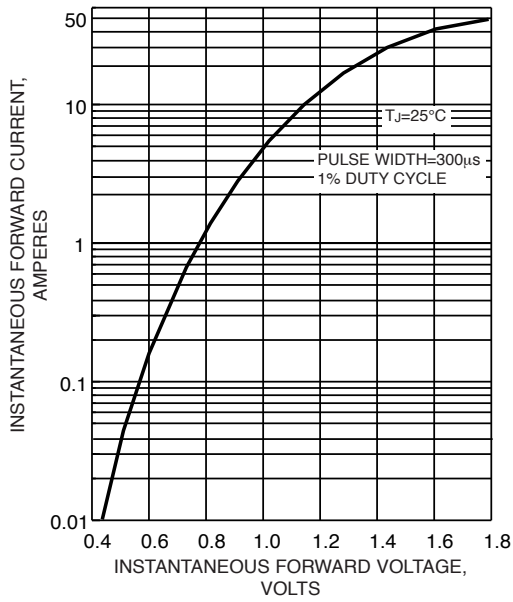


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

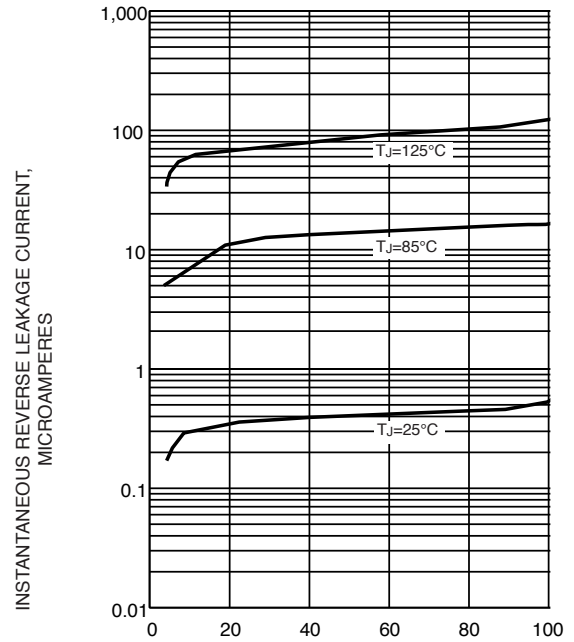
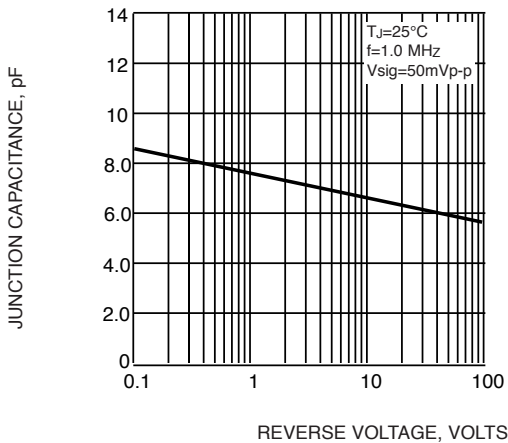


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



PERCENT OF RATED PEAK REVERSE VOLTAGE, %

