



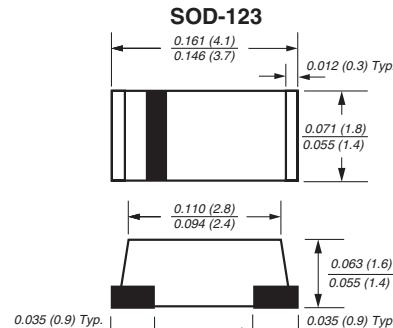
Surface Mount Ultrafast Plastic Rectifier

Reverse Voltage 50 to 1000V
1.0A

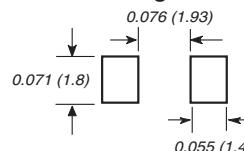
Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- For surface mount applications
- Low profile package
- Ultrafast recovery time for high efficiency
- Glass passivated chip junctions
- Low Vf, low power loss
- High temperature soldering guaranteed: 250°C/10 seconds on terminals
- Easy pick and place

Mechanical Data

Case: JEDEC SOD123/Mini SMA molded plastic**Terminals:** Solderable per MIL-STD-750, Method 2026**Polarity:** Color band denotes cathode end**Weight:** 0.05g

Mounting Pad Layout



Dimensions in inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	ES1AM	ES1BM	ES1DM	ES1GM	ES1JM	ES1KM	ES1MM	Units
Device marking code		H1	H2	H3	H4	H5	H6	H7	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at TA=55°C	I _{F(AV)}						1.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}					30			A
Typical thermal resistance ⁽¹⁾	R _{θ JA}				32				°C/W
Operating junction and storage temperature range	T _J , T _{STG}				-55 to +150°C				°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	ES1AM	ES1BM	ES1DM	ES1GM	ES1JM	ES1KM	ES1MM	Units
Maximum instantaneous forward voltage at 1.0A ⁽²⁾	V _F		1.0		1.3		1.7		V
Maximum DC reverse current TA= 25°C at rated DC blocking voltage TA=100°C	I _R				5.0				µA
					150				
Maximum reverse recovery time I _F =0.5A, I _{rr} =1.0A, I _{rr} = 0.25A	t _{rr}			50		75			ns
Typical junction capacitance at 4.0V, 1MHz	C _J				20				pF

Notes:

(1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length

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



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

Fig. 1 - Maximum Forward Current Derating Curve

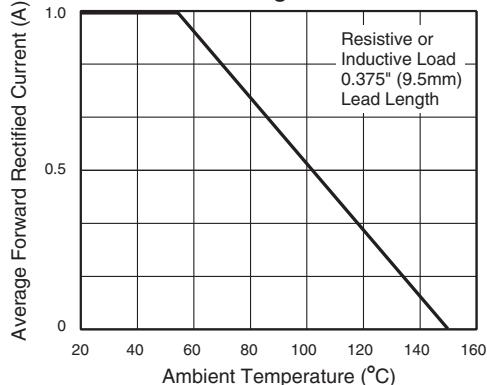


Fig. 3 - Typical Instantaneous Forward Characteristics

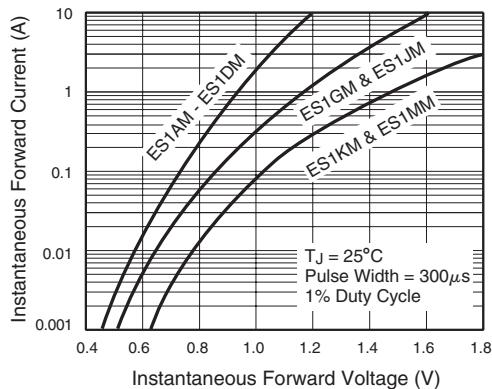


Fig. 5 - Typical Junction Capacitance

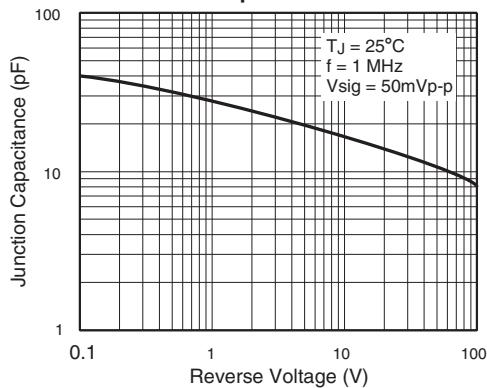


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

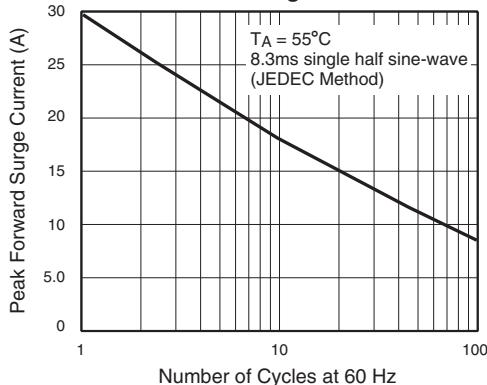


Fig. 4 - Typical Reverse Leakage Characteristics

