



## SURFACE MOUNT SUPER FAST RECTIFIER

**ESM1A THRU ESM1J**

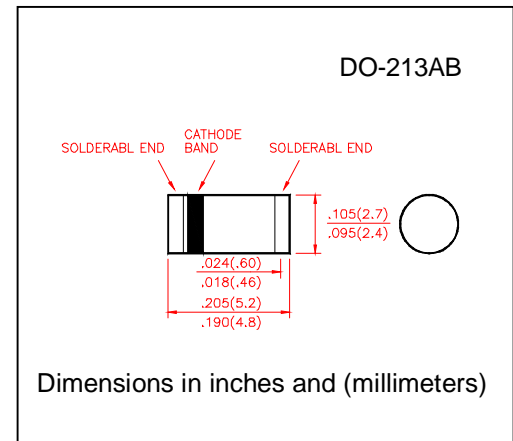
**VOLTAGE RANGE**            **50 to 600Volts**  
**FORWARD CURRENT**        **1.0 Ampere**

### FEATURES

- For surface mounted applications
- Glass passivated chip junction
- Low leakage current
- Fast switchig
- Plastic package has underwrites laboratory flammability Classification 94V-0
- High temperature soldering guaranteed  
250°C/10 seconds at terminals

### MECHANICAL DATA

- Case: molded plastic
- Polarity: band indicate cathode
- Mounting position: Any
- Weight: 0.12 grams



### 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%

	SYMBOLS	ESM 1A	ESM 1B	ESM 1C	ESM 1D	ESM 1E	ESM 1G	ESM 1J	UNITS
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at $T_T=100^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	095			1.25		1.7		Volts
Maximum DC Reverse Current at rated DC Blocking Voltage at	$T_A = 25^\circ\text{C}$	5.0							μA
	$T_A = 125^\circ\text{C}$	100							
Typical Reverse Recovery Time (NOTE 1)	$T_{rr}$	35							ns
Typical Junction Capacitance (Note 2)	$C_J$	15							PF
Typical Thermal Resistance (Note 3)	$R_{\theta JT}$	40							°C/W
Operating 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. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
3. Thermal resistance Junction to terminal 6.0mm<sup>2</sup> copper pads to each terminal.



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## RATINGS AND CHARACTERISTIC CURVES ESM1A THRU ESM1J

