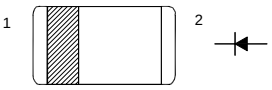
# ES1AM THRU ES1MM

## Surface Mount Superfast Recovery Rectifier
**Reverse Voltage – 50 to 1000 V**
**Forward Current – 1 A**

### Features
- Easy pick and place
- For surface mounted applications
- Low profile package
- Superfast recovery times for high efficiency

PINNING

| PIN | DESCRIPTION |
|---|---|
| 1 | Cathode |
| 2 | Anode |




Top View
Marking Code: ES1AM~ES1DM: ESL
ES1EM~ES1GM: ESM
ES1JM~ES1MM: ESH
Simplified outline Mini-SMA and symbol



### Absolute Maximum Ratings and Characteristics
Ratings at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Parameter | Symbols | ES1AM | ES1BM | ES1CM | ES1DM | ES1EM | ES1GM | ES1JM | ES1KM | ES1MM | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current $T_L$= 100℃ | $I_{F(AV)}$ | 1 | | | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | | | A |
| Maximum Forward Voltage at 1 A | $V_F$ | 0.95 | | | | 1.3 | | 1.7 | | | V |
| Maximum Reverse Current at $T_A$ = 25℃<br>at Rated DC Blocking Voltage at $T_A$ = 100 ℃ | $I_R$<br>$I_R$ | 5<br>100 | | | | | | | | | μA |
| Typical Junction Capacitance at $V_R$ = 4 V, f = 1 MHz | $C_J$ | 10 | | | | | | | | | pF |
| Maximum Reverse Recovery Time at $I_F$ = 0.5 A, $I_R$ = 1 A, $I_{rr}$ = 0.25 A | $t_{rr}$ | 35 | | | | | | | | | ns |
| Operating Junction and Storage Temperature Range | $T_j$ ,$T_{stg}$ | - 55 to + 150 | | | | | | | | | ℃ |

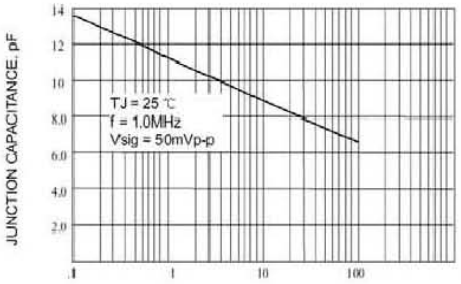
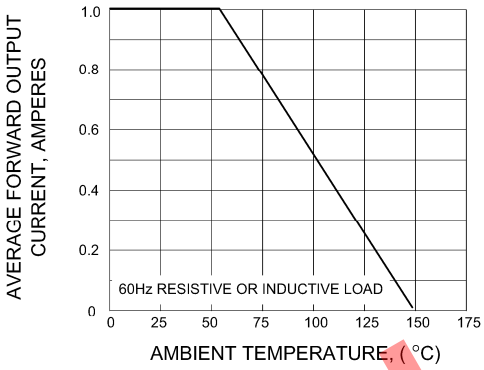



Fig .1- TYPICAL JUNCTION CAPACITANCE

FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT



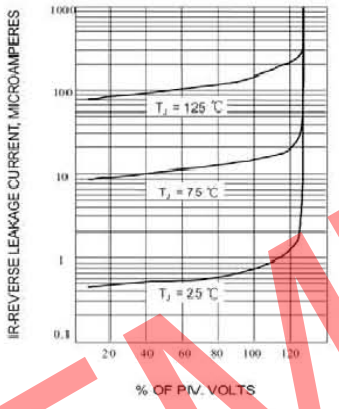




Fig. 3-TYPICAL REVERSE CHARACTERISTICS

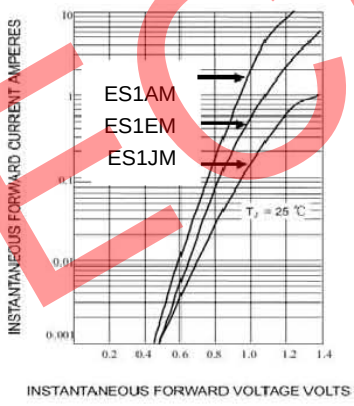
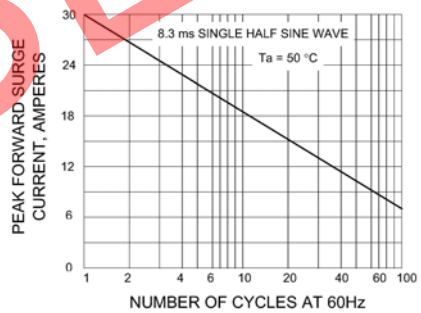


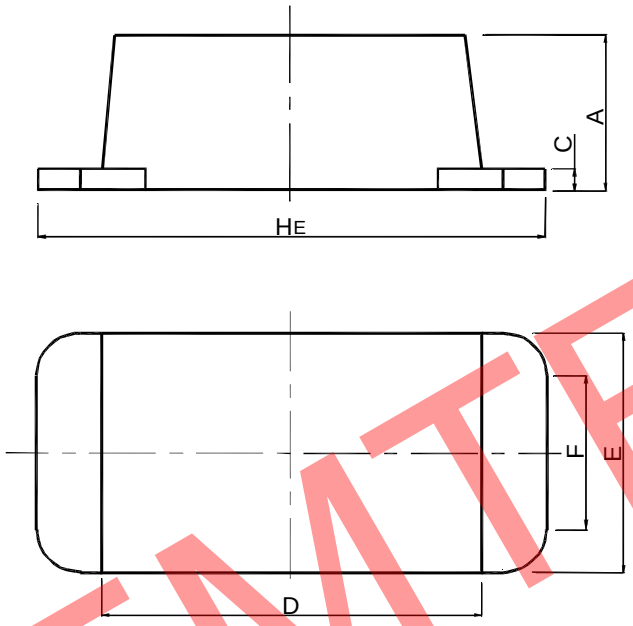

Fig. 4-TYPICAL FORWARD CHARACTERISTICS

Fig.5- - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



## PACKAGE OUTLINE

**Plastic surface mounted package; 2 leads** **Mini-SMA**




| UNIT | A | C | D | E | F | $H_E$ |
|---|---|---|---|---|---|---|
| mm | 1.08 | 0.2 | 2.9 | 1.9 | 1.53 | 3.9 |
| | 0.88 | 0.1 | 2.6 | 1.7 | 1.43 | 3.5 |