SAMYANG ELECTRONICS

ES1001FL --- ES1006FL(E1B-E1J)

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 100 --- 600 V
CURRENT: 1.0A

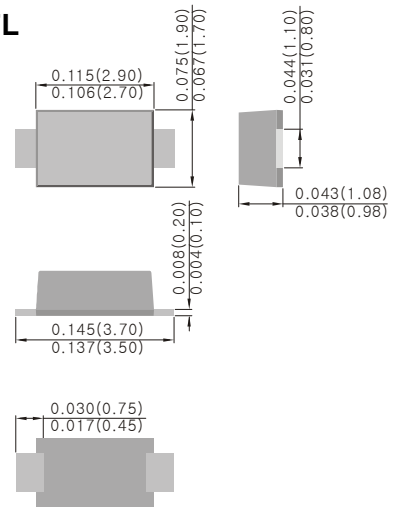
FEATURES

- For surface mounted applications in order to optimize board space
- Ideal for automated placement
- Glass passivated
- High temperature soldering : 260 °C / 10 seconds at terminals
- Lead free in ccompliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 0.0006 ounce, 0.0172 gram
- Polarity: Color band denotes cathode end

SOD-123FL



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbol	ES1001FL	ES1002FL	ES1004FL	ES1006FL	Units
Marking Code		–	E1B	E1D	E1G	E1J(ESH)	–
Maximum repetitve peak reverse voltage		V_{RRM}	100	200	400	600	V
Maximum RMS voltage		V_{RMS}	70	140	280	420	V
Maximum DC blocking voltage		V_{DC}	100	200	400	600	V
Maximum average forward current	T_L=120°C	$I_{F(AV)}$	1				A
Peak forward surge current 8.3ms single half sine-w	T_L=25°C	I_{FSM}	30				A
Maximum instantaneous forward voltage	1.0A	V_F	0.95		1.25	1.7	V
Maximum DC reverse current at rated DC blocking voltage	T_J=25°C T_J=100°C	I_R	0.5 10				μA
Reverse recovery time	I_F=0.5A I_R=1A I_{RR}=0.25A	T_{RR}	35				ns
Typical capacitance	4V,1MHz	C_J	7				pF

ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	ES1001FL	ES1002FL	ES1004FL	ES1006FL	Units
Typical Thermal Resistane	(Notes 1) (Notes 2)	$R_{\theta JA}$ $R_{\theta JC}$	200 30				°C/W
Operating junction and storage temperature range		T_J , T_{STG}	-55 to +150				°C

NOTES : 1.Mounted on an FR4 PCB, single-sided copper, mini pad.
2.Mounted on an FR4 PCB, single-sided copper, with 10cm*10cm copper pad area.

FIG . 1 TYPICAL JUNCTION CAPACITANCE

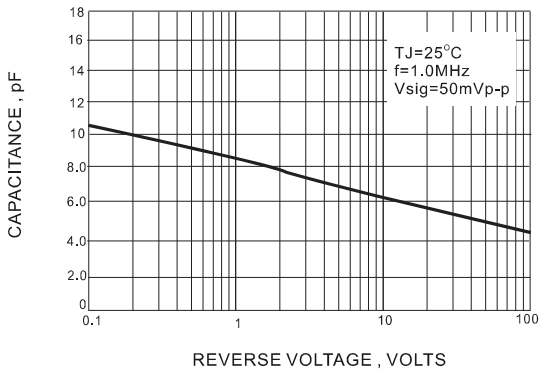


FIG.2 FORWARD CURRENT DERATING CURVE

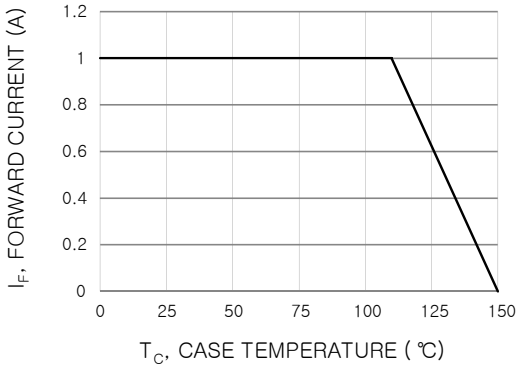


FIG . 3 TYPICAL FORWARD CHARACTERISTICS

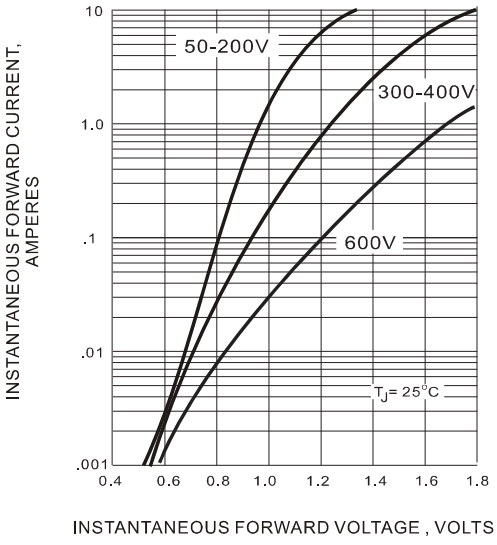


FIG . 4 TYPICAL LEAKAGE CURRENT vs JUNCTION TEMPERATURE

