TOP ONE SEMI CONDUCTOR

SMALL SURFACE MOUNT SUPER FAST DIODES

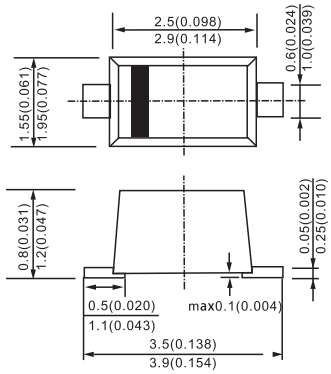
ES1001FL THRU ES1006FL

100V-600V 1.0A

FEATURES

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Glass Passivated
- High temperature soldering : 260°C / 10 seconds at terminals
- In compliance with EU RoHS 2002/95/EC directives

SOD-123FL



Dimensions in millimeters

MECHANICAL DATA

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbol	ES1001FL	ES1002FL	ES1004FL	ES1006FL	Units
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-wave	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
Thermal resistance junction to ambient air	$R_{\theta JA}$ $R_{\theta JC}$	165 20				°C/W
Operating junction and storage temperature range	T_J , T_{STG}	-55 to +150				°C

RATINGS AND CHARACTERISTIC CURVES ES1001FL THRU ES1006FL

RATING AND CHARACTERISTIC CURVES

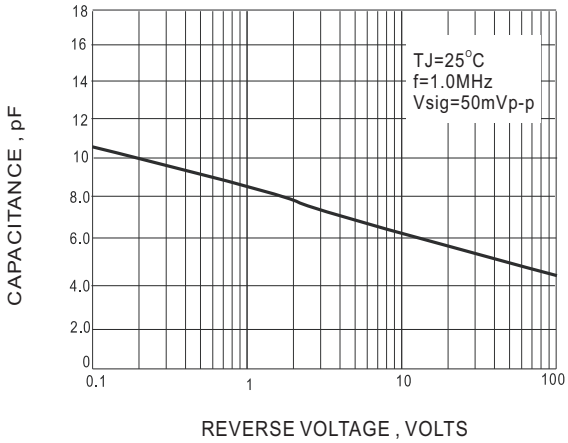


Fig.1-TYPICAL JUNCTION CAPACITANCE

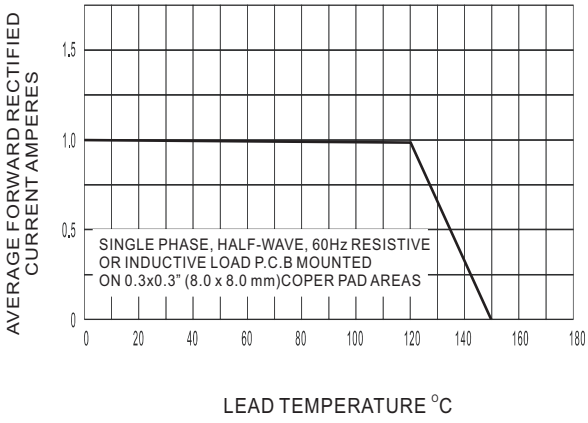


Fig.2-AXIMUM AVERAGE FORWARD CURRENT DERATING

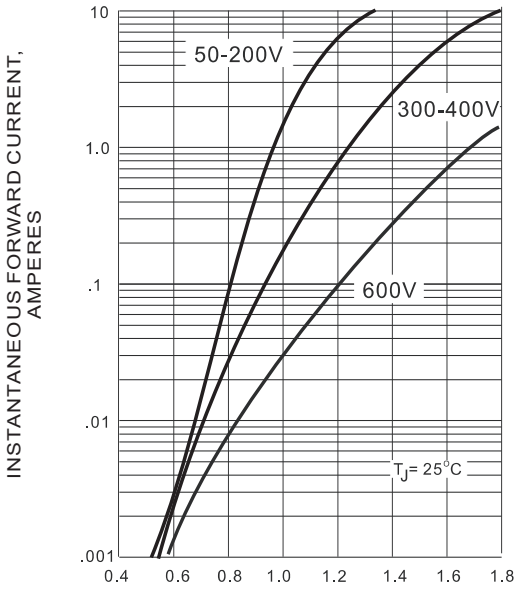


Fig.3-TYPICAL FORWARD CHARACTERISTICS

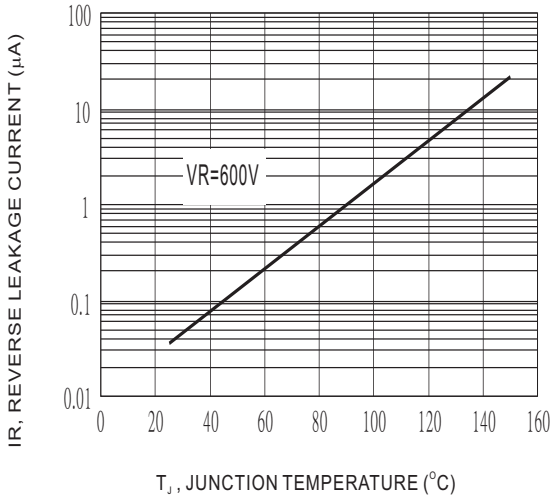


Fig.4-TYPICAL LEAKAGE CURRENT vs JUNCTION TEMPERATURE