

Features

- Low forward voltage drop.
- Ideal for automated placement.
- Robust guarding for over voltage protection.
- Lead-free parts meet RoHS requirements.
- Compliant to Halogen-free.
- Suffix“-Q1” for AEC-Q101.

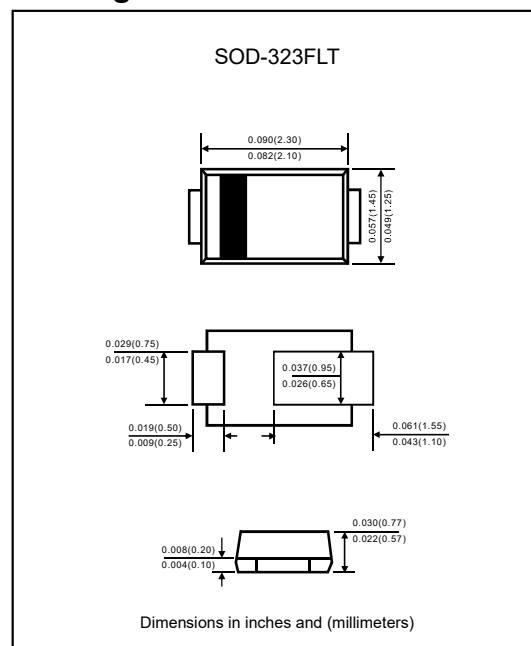
Applications

- DC to DC converter.
- Switching mode converters and inverters.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant.
- Case : Molded plastic, SOD-323FLT.
- Polarity : Indicated by cathode band.

Package Outline



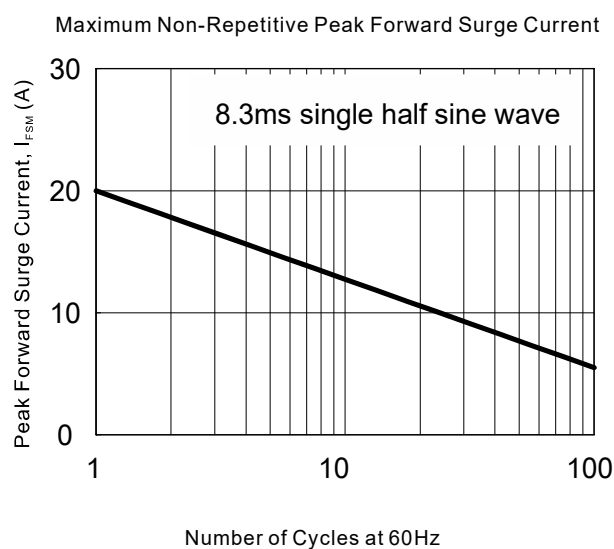
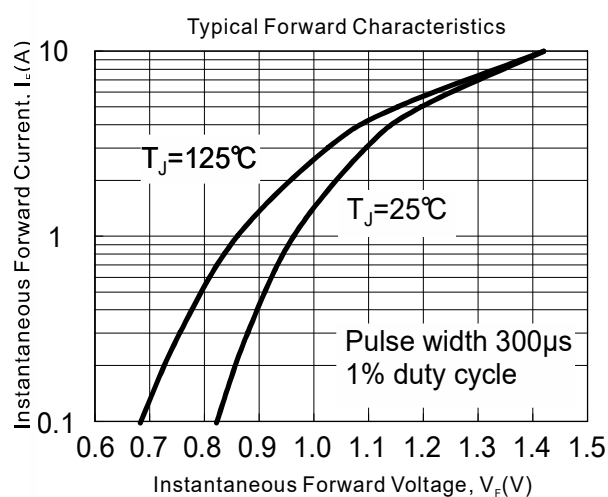
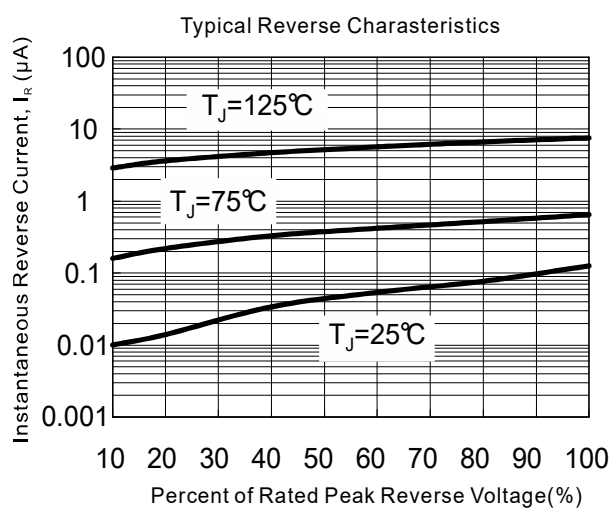
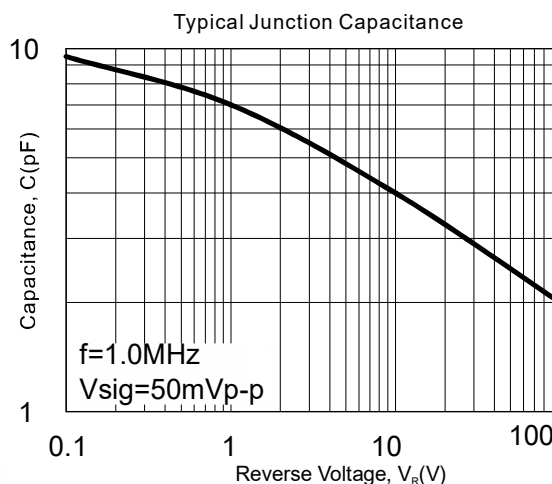
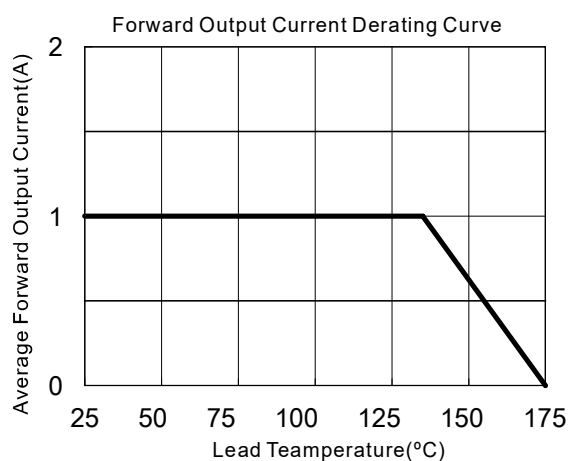
Maximum ratings (At $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	600	V
RMS reverse voltage	V_{RMS}	420	V
Forward current	I_F	1	A
Peak forward surge current (8.3ms Single half sine-wave)	I_{FSM}	20	A
Typical thermal resistance, junction to ambient	$R_{\theta JA}$	200	$^{\circ}\text{C/W}$
Typical thermal resistance, junction to lead	$R_{\theta JL}$	110	$^{\circ}\text{C/W}$
Junction temperature	T_J	+175	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +175	$^{\circ}\text{C}$

Electrical characteristics (At $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=1.0\text{A}$	V_F			1.1	V
Reverse current	$V_R=600\text{V}$	I_R			1	μA
Junction Capacitance	$V_R=4\text{V}$, $f=1\text{MHz}$	C_J		5		pF
Reverse recovery time	$I_F=0.5\text{A}$, $I_R=1\text{A}$, $t_{rr}=0.25\text{A}$	t_{rr}		780		ns

Rating and characteristic curves



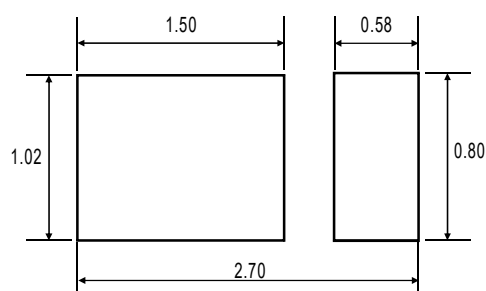
Pinning information

Pin	Simplified outline	Symbol
Pin1 Cathode Pin2 Anode		

Marking

Type number	Marking code
AS1H05-NFLT-Q1	A7

Suggested solder pad layout



Dimensions in millimeters