

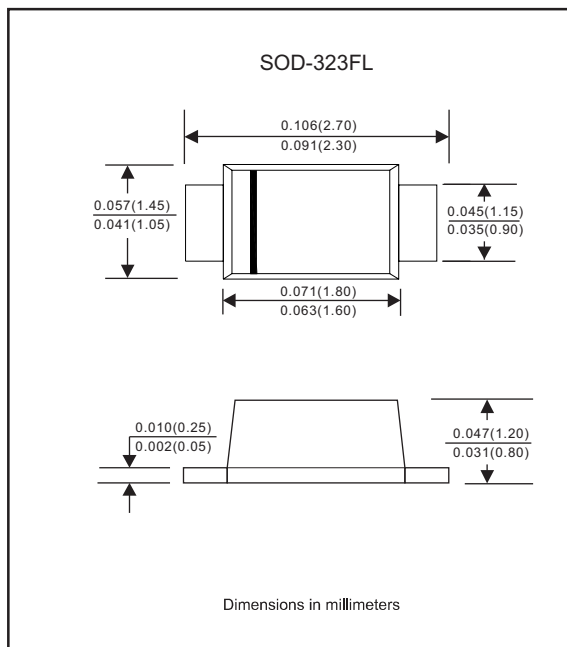
Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

Mechanical data

- **Package:** SOD-323FL
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

Package outline



Maximum ratings and Electrical characteristics (AT $T_a=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	60Hz sine wave, Resistance load	I_O			1.0	A
Forward surge current	@ 60Hz half-sine wave, 1 cycle, $T_J=25^{\circ}\text{C}$	I_{FSM}			30	A
	@ 1ms, square wave, 1 cycle, $T_J=25^{\circ}\text{C}$				60	A
Reverse current	$V_R = V_{RRM}$ $T_J = 25^{\circ}\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM}$ $T_J = 125^{\circ}\text{C}$	I_R			30	mA
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		90		$^{\circ}\text{C/W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		43		pF
Storage temperature		T_{STG}	-55		+175	$^{\circ}\text{C}$

Note: (1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm copper pad areas.

SYMBOLS	V _{RRM} ^{*1} (V)	V _{RMS} ^{*2} (V)	V _R ^{*3} (V)	V _F ^{*4} (V)	Operating temperature T _J , (°C)
DSK14-NF-Q1	40	28	40	0.55	-55 to +125
DSK16-NF-Q1	60	42	60	0.70	
DSK110-NF-Q1	100	70	100	0.85	-55 to +175
DSK115-NF-Q1	150	105	150	0.90	
DSK120-NF-Q1	200	140	200		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F=1.0\text{A}$

Rating and characteristic curves

FIG1: I_o -T_c Curve

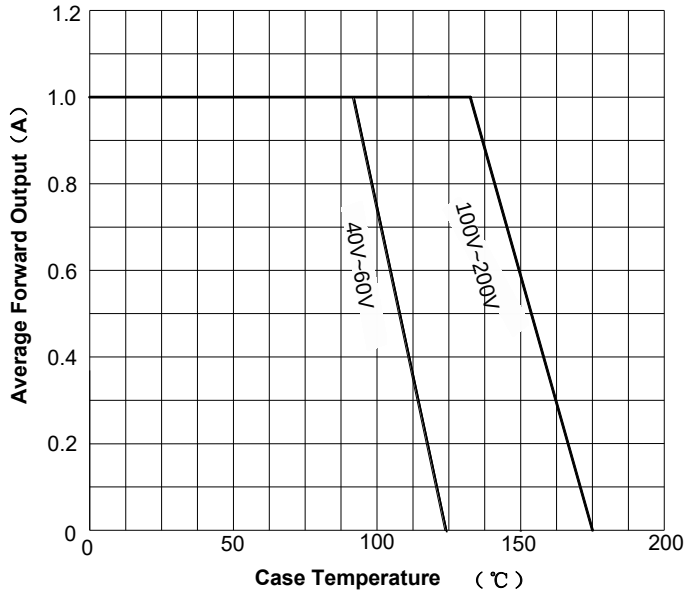


FIG2: Surge Forward Current Capability

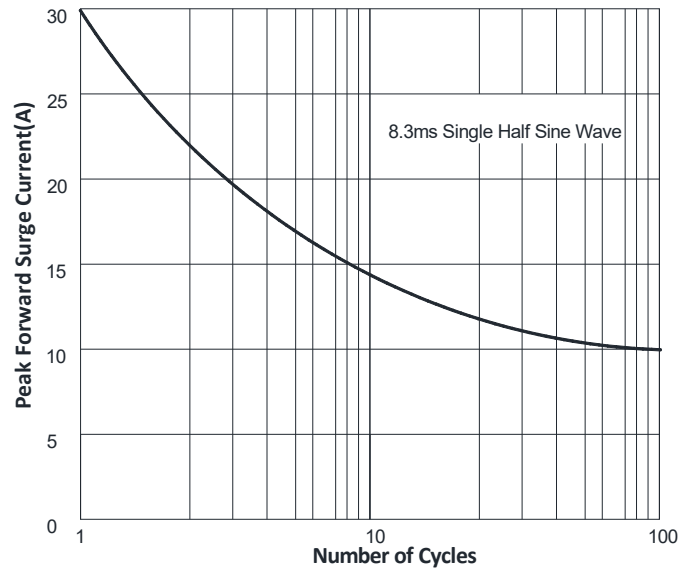


FIG3: Forward Voltage

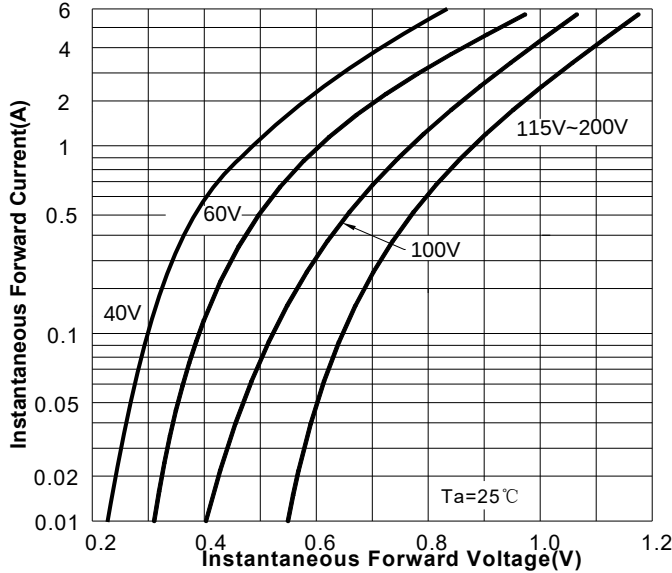
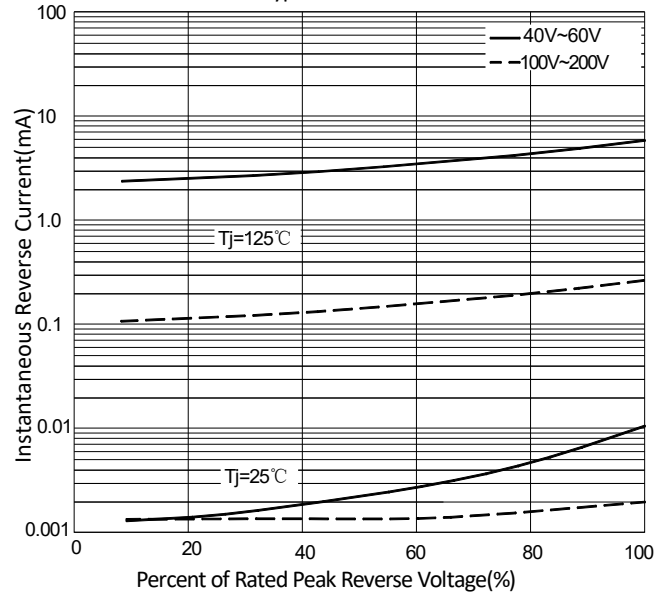
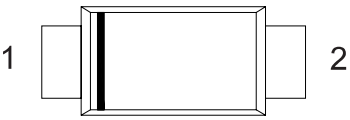


FIG4: Typical Reverse Characteristics



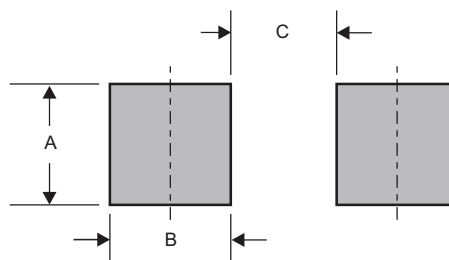
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DSK14-NF-Q1	14
DSK16-NF-Q1	16
DSK110-NF-Q1	10
DSK115-NF-Q1	115
DSK120-NF-Q1	120

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323FL	0.059(1.50)	0.039(1.00)	0.051(1.30)