

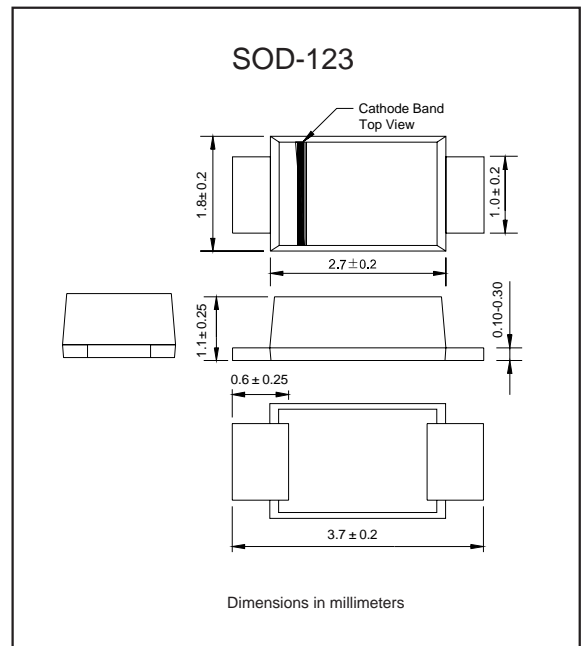
Features

- Easy pick and place
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Superfast recovery times for high efficiency
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

Mechanical data

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026

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	See Fig.2	I_O			2.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	I_{FSM}			50	A
Reverse current	$V_R = V_{RRM}$ $T_a = 25^\circ\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM}$ $T_a = 125^\circ\text{C}$				100	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		75		$^\circ\text{C/W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		30		pF
Storage temperature		T_{STG}	-55		+150	$^\circ\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	t_{rr}^{*5} (ns)	Operating temperature T_{Jr} ($^\circ\text{C}$)
DSF2A-Q1	50	35	50	1.00	35	-55 to +150
DSF2B-Q1	100	70	100			
DSF2C-Q1	150	105	150			
DSF2D-Q1	200	140	200			
DSF2E-Q1	300	210	300	1.25		
DSF2G-Q1	400	280	400			
DSF2J-Q1	600	420	600			

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@ $I_F=2.0\text{A}$
- *5 Maximum Reverse recovery time, note 2

Note: 1.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas
2. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Rating and characteristic curves

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

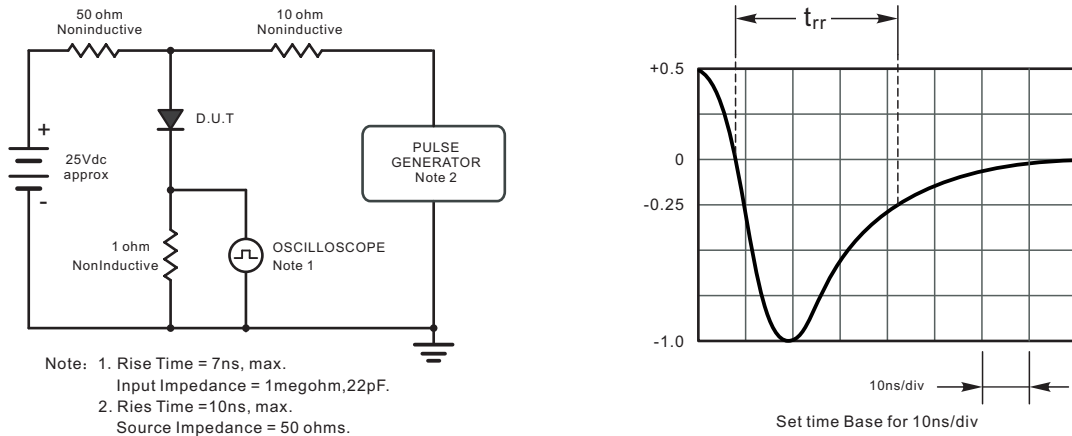


Fig.2 Maximum Average Forward Current Rating

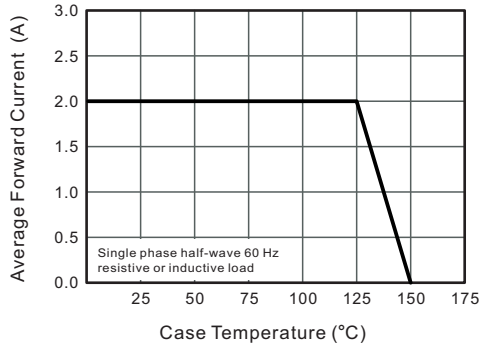


Fig.3 Typical Reverse Characteristics

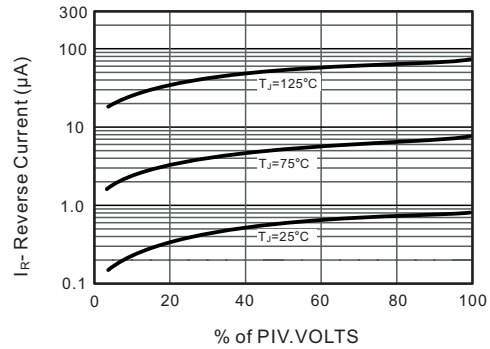


Fig.4 Typical Forward Characteristics

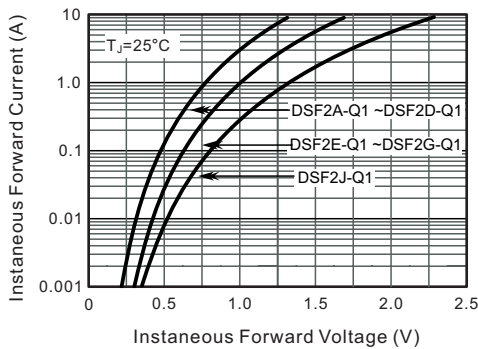


Fig.5 Typical Junction Capacitance

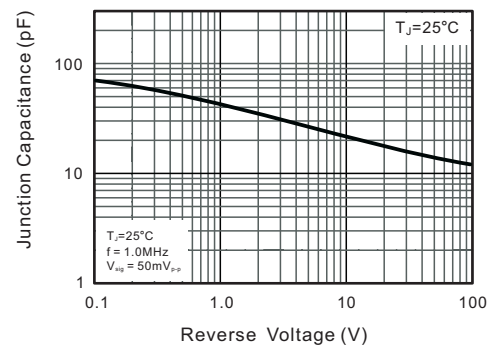
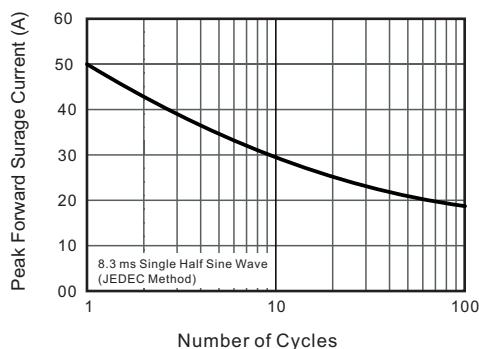




Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



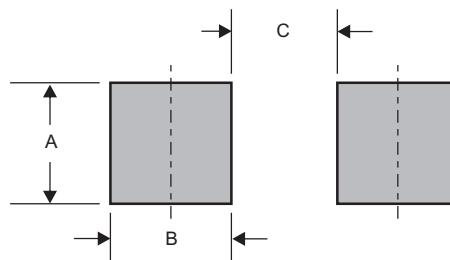
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
DSF2A-Q1	E2A
DSF2B-Q1	E2B
DSF2C-Q1	E2C
DSF2D-Q1	E2D
DSF2E-Q1	E2E
DSF2G-Q1	E2G
DSF2J-Q1	E2J

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.075 (1.90)	0.055 (1.40)	0.075 (1.90)