

### Features

- Ideal for automated placement
- Low forward voltage drop
- Compliant to Halogen-free
- Suffix “-Q1” for AEC-Q101

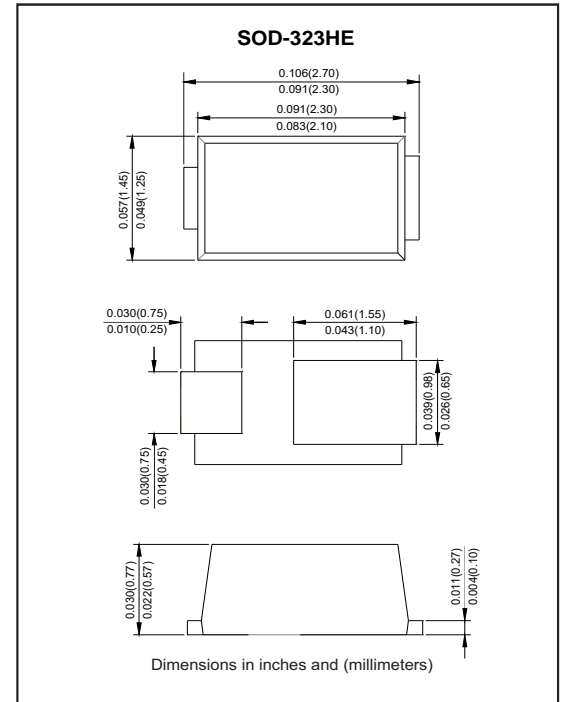
### Applications

- DC to DC converter
- Switching mode converters and inverters
- General purpose

### Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-323HE
- Polarity : Indicated by cathode band
- Mounting Position : Any

### 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		$I_O$			1	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	$I_{FSM}$			20	A
Reverse current	$V_R = V_{RRM}$	$I_R$			1	$\mu\text{A}$
Thermal resistance	Junction to ambient, note 1	$R_{\theta JA}$		100		$^{\circ}\text{C/W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		5		pF
Storage temperature		$T_{STG}$	-55		+175	$^{\circ}\text{C}$

SYMBOLS	$V_{RRM}$ <sup>*1</sup> (V)	$V_{RMS}$ <sup>*2</sup> (V)	$V_R$ <sup>*3</sup> (V)	$V_F$ <sup>*4</sup> (V)	$t_{rr}$ <sup>*5</sup> (ns)	Operating temperature $T_J$ , ( $^{\circ}\text{C}$ )
S1J-NHT-D-Q1	600	420	600	1.1	780	-55 to +175

Note: 1.The data tested by surface mounted on a 1 inch FR-4 board with 2oz copper  
 2.Reverse recovery time test condition,  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

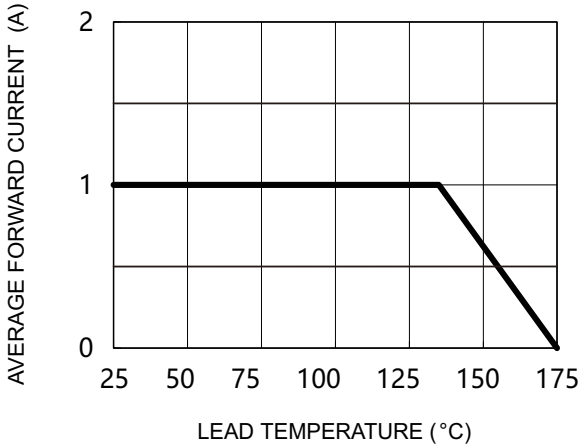
\*3 Continuous reverse voltage

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

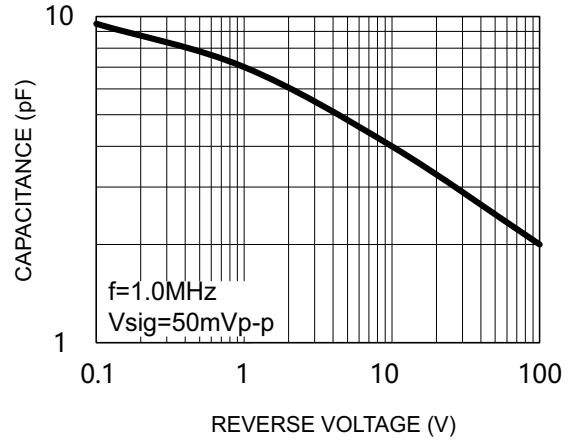
\*5 Typical Reverse recovery time, note 2

### Rating and characteristic curves

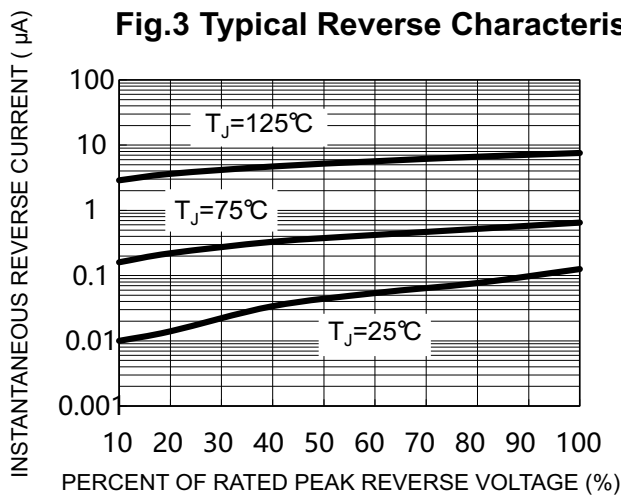
**Fig.1 Forward Current Derating Curve**



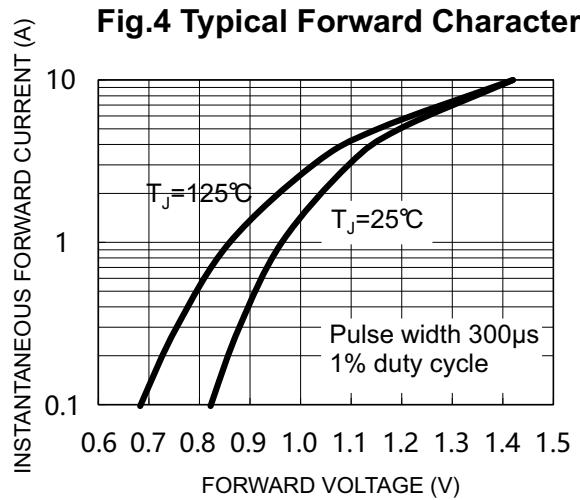
**Fig.2 Typical Junction Capacitance**



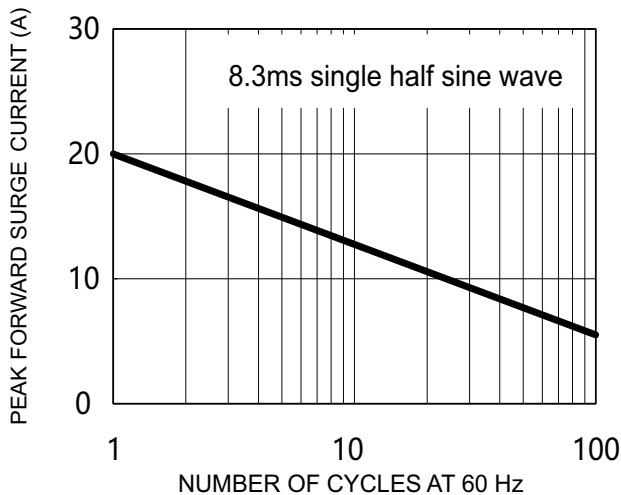
**Fig.3 Typical Reverse Characteristics**





**Fig.4 Typical Forward Characteristics**



**Fig.5 Maximum Non-Repetitive Forward Surge Current**



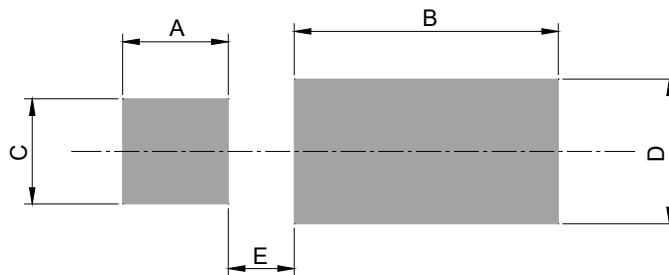
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
S1J-NHT-D-Q1	A7

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C	D	E
SOD-323HE	0.032 (0.80)	0.079 (2.00)	0.032 (0.80)	0.043 (1.10)	0.020(0.50)