SU145-NHT-D-Q1

1.0A Ultra Low VF Surface Mount Schottky Barrier Rectifiers- 45V

Features

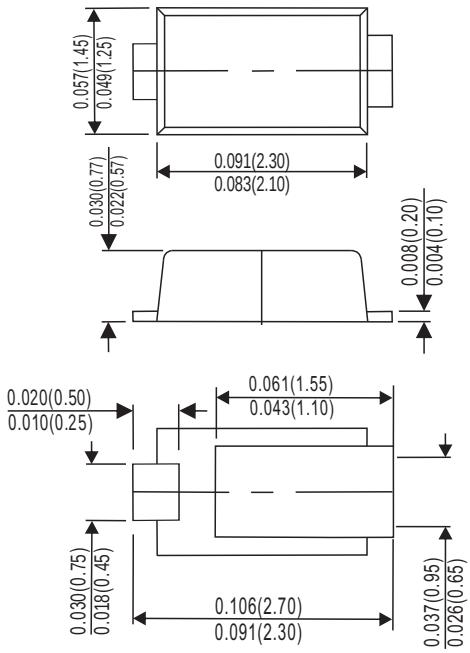
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Compliant to Halogen-free
- Suffix “-Q1” for AEC-Q101

Mechanical data

- Case: SOD-323HE
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: color band denotes cathode end

Package outline

SOD-323HE



Dimensions in inches and (millimeters)

Maximum Ratings (T_a=25℃ Unless otherwise specified)

(Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	32	
Maximum DC Blocking Voltage	V_{DC}	45	
Average Forward Rectified Current	$I_{F(AV)}$	1	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I_{FSM}	25	A
Typical Thermal Resistance (1)	$R_{\theta JA}$	150	℃/W
Operating Junction Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃

Electrical Characteristics (T_a=25℃ Unless otherwise specified)

Parameter	Test Conditions	Symbol	Value (max)	Unit
Forward Voltage	I_F=1A	V_F	0.47	V
Reverse Current	T_A=25℃, @ V_R=V_{RRM}	I_R	0.5	mA
	T_A=100℃ , @ V_R=V_{RRM}		20	
Typical Junction Capacitance (2)		C_J	160	pF

(1) P.C.B. mounted with 8X 8 mm copper pad areas.

(2) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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Rating and characteristic curves

Fig.1 Forward Current Derating Curve

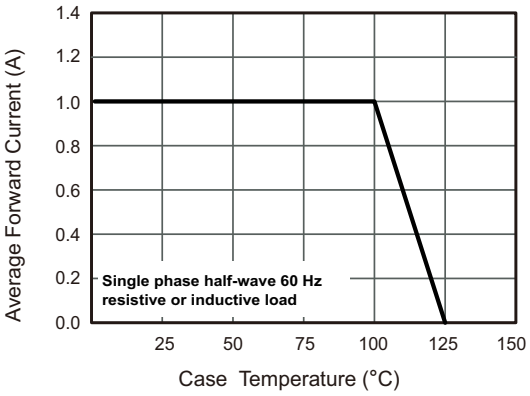


Fig.2 Typical Reverse Characteristics

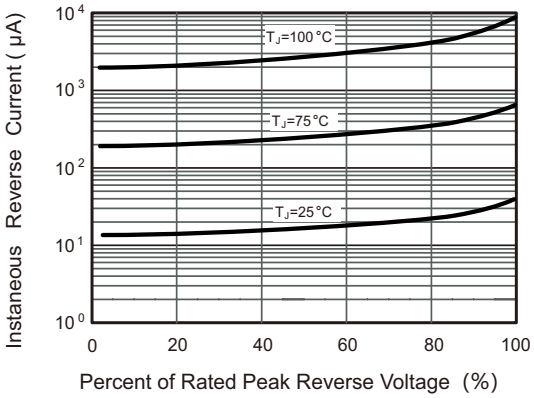


Fig.3 Typical Forward Characteristic

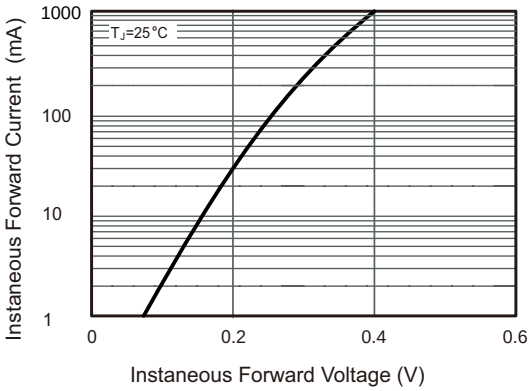


Fig.4 Typical Junction Capacitance

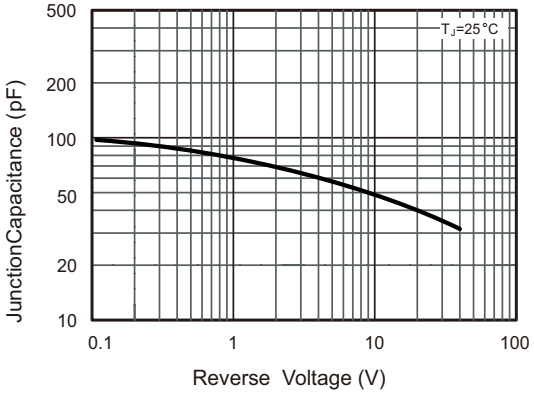


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

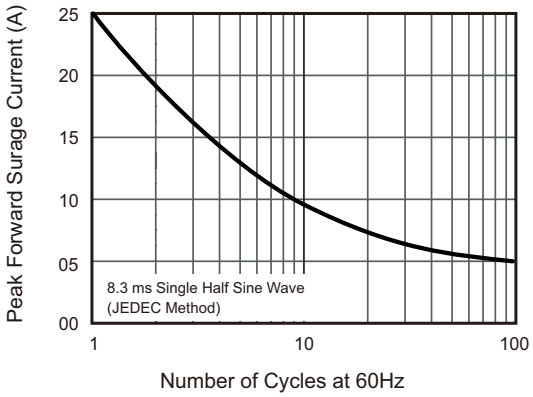
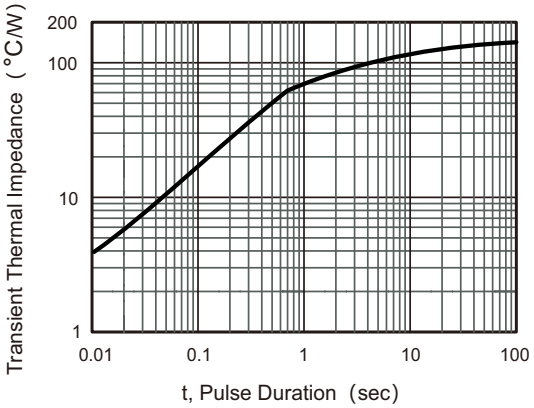


Fig.6- Typical Transient Thermal Impedance



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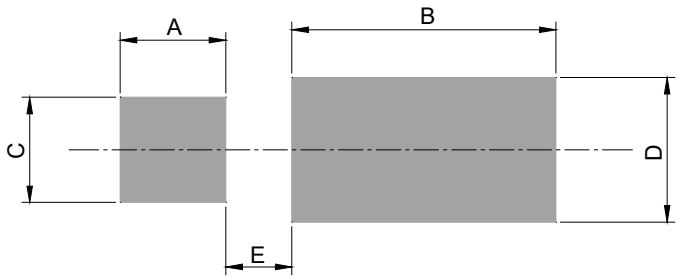
Pinning information

Pin	Simplified outline	Symbol
Uni-Directional Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
SU145-NHT-D-Q1	L4

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C	D	E
SOD-323HE	0.023 (0.58)	0.059 (1.50)	0.032 (0.80)	0.040 (1.02)	0.024(0.62)