

Features

- Metal silicon junction, majority carrier conduction
- High forward surge current capability
- Low forward voltage drop
- High temperature soldering guaranteed: 260°C @ 10s
- Robust guarding for over voltage protection
- RoHS compliant with Halogen-free

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SOD-323HE

Mechanical Data

- Case: SOD-323HE
- Molding compound: UL flammability classification rating 94-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode end

Ordering Information

Part Number	Package	Marking Code
SS1020HE	SOD-323HE	12
SS1030HE	SOD-323HE	13
SS1040HE	SOD-323HE	14

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	SS1020HE	SS1030HE	SS1040HE	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	20	30	40	V
RMS Reverse Voltage	V _{RMS}	14	21	28	V
DC Blocking Voltage	V _{DC}	20	30	40	V
Average Forward Output Current	I _{F(AV)}	1			A
Peak Forward Surge Current, 8.3ms Single Half-Sine-Wave	I _{FSM}	25			A

Thermal Characteristics

Parameter	Symbol	SS1020HE	SS1030HE	SS1040HE	Unit
Thermal Resistance Junction-to-Air *1	R _{θJA}	88			°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	35			°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	22			°C/W
Operating Junction Temperature Range	T _J	-55 ~ +125			°C
Storage Temperature Range	T _{STG}	-55 ~ +150			°C

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage ^{*2}	V_F	$I_F = 1\text{A}$	-	-	0.55	V
Maximum Peak Reverse Current ^{*3}	I_R	Rated V_R , $T_J = 25^\circ\text{C}$	-	-	100	μA
		Rated V_R , $T_J = 100^\circ\text{C}$	-	-	10	mA

Notes:

- The data tested by surface mounted on p.c.b. with 2.2cm x 1.7 cm x 1mm copper pad area
- The data tested by pulsed, pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 1\%$
- The data tested by pulsed, pulse width $\leq 40\text{ms}$

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

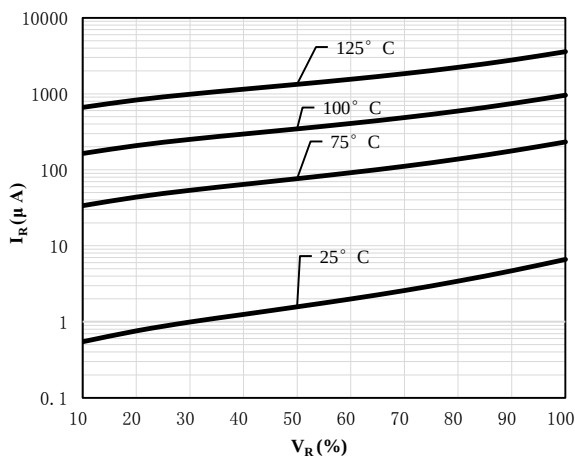


Fig 1 Typical Reverse Characteristic

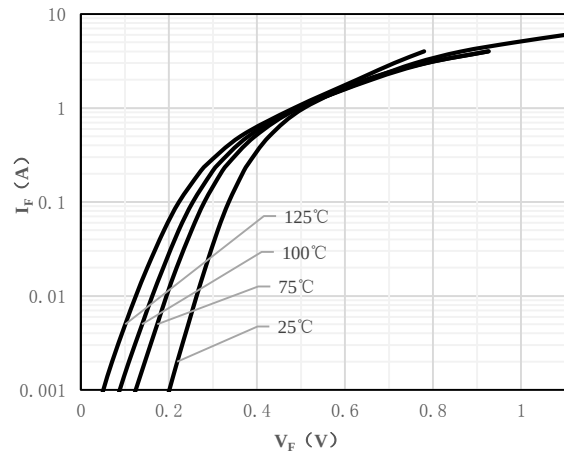


Fig 2 Typical Forward Characteristics

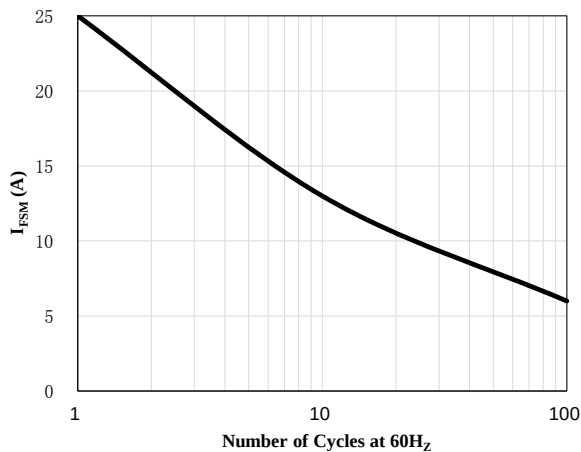


Fig 3 Surge Current Derating Curve

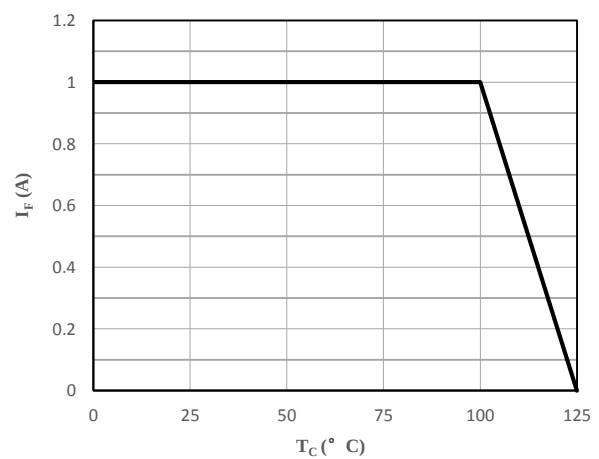
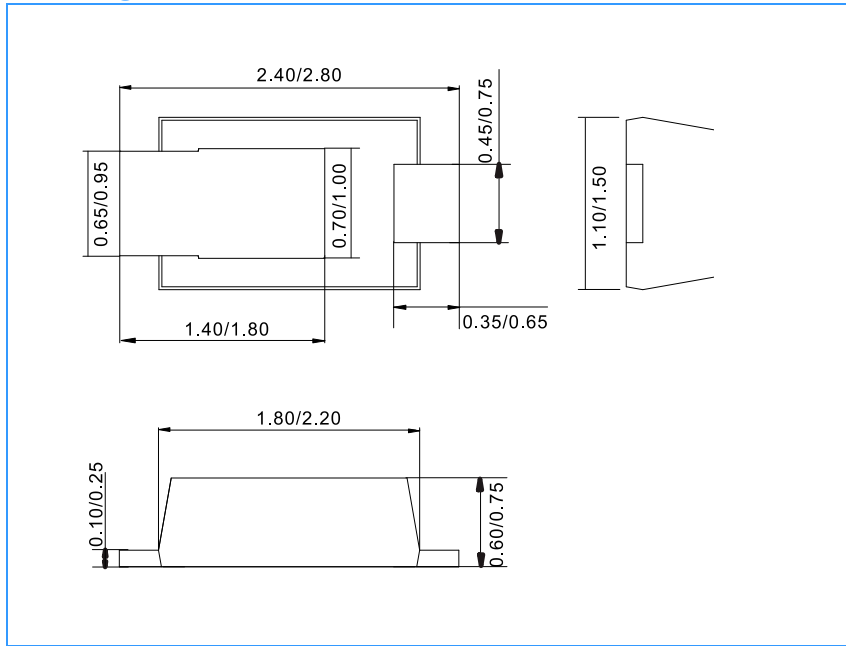


Fig 4 Forward Current Derating Curve

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)

