

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
- Qualified to AEC-Q101 Standards

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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
TSS1060HE	SOD-323HE	16

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	60	V
RMS Reverse Voltage	V _{RMS}	42	V
DC Blocking Voltage	V _{DC}	60	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	Value	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 ~ +150	°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
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 100\mu\text{A}$	60	-	-	V
Forward Voltage ^{*2}	V_F	$I_F = 1\text{A}$	-	-	0.7	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
Diode capacitance	C_J	$V_R = 4\text{V}$, $f = 1\text{MHz}$	-	45	-	pF

Notes:

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

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

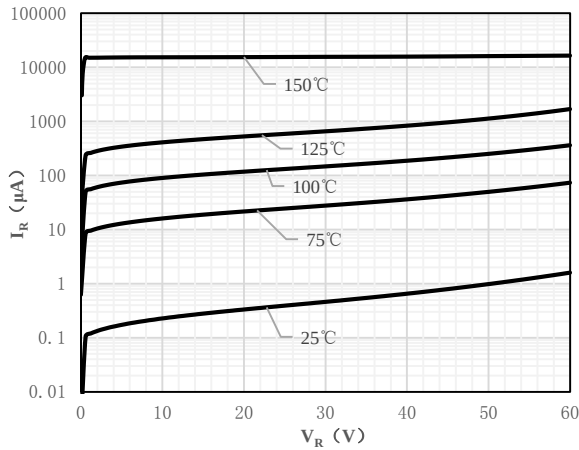


Fig 1 Typical Reverse Characteristic

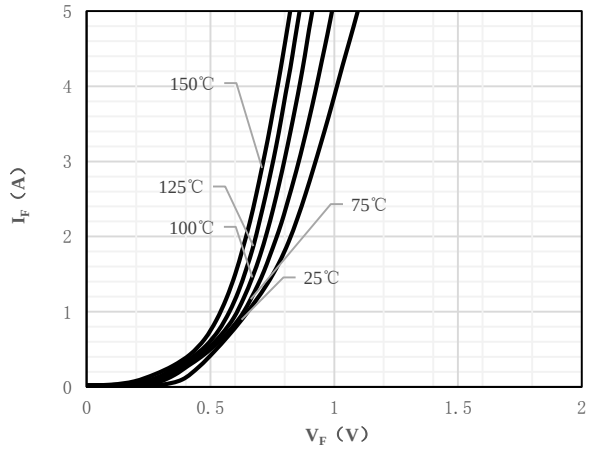


Fig 2 Typical Forward Characteristics

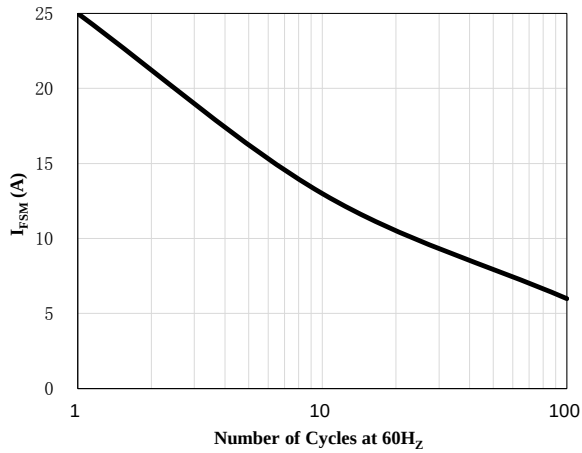


Fig 3 Surge Current Derating Curve

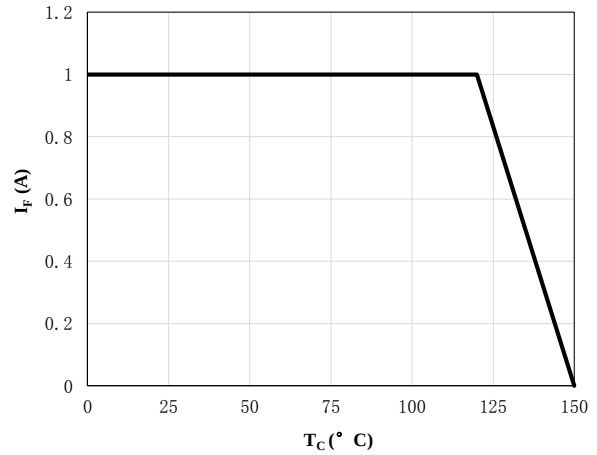


Fig 4 Forward Current Derating Curve

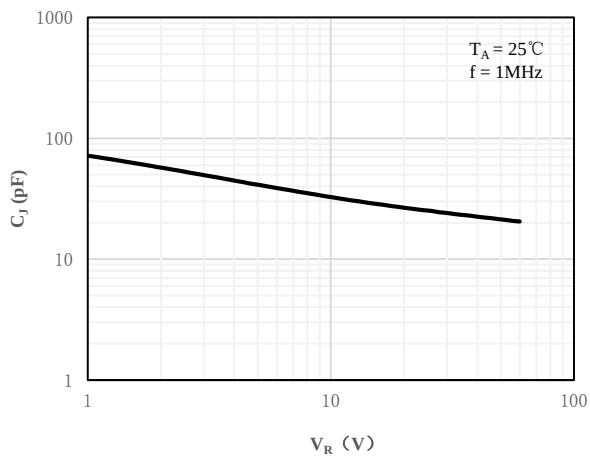
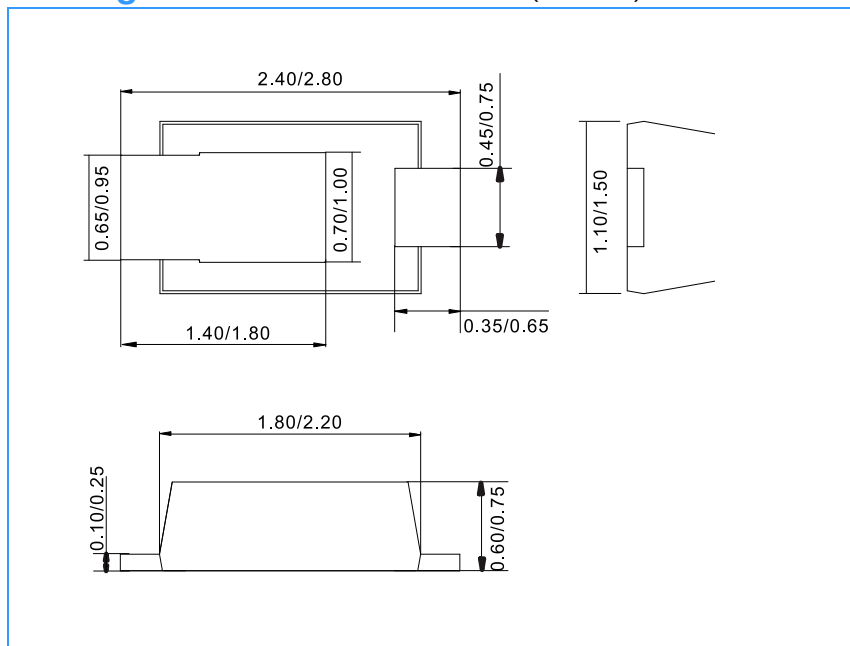


Fig 5 Capacitance vs. Reverse Voltage

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)

