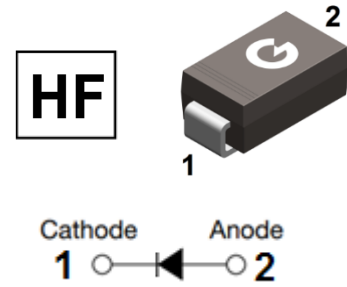


Super-Fast Recovery Rectifier

THES2DA

Features

- Low forward voltage drop
- High forward surge current capability
- Low-profile SMD ideal for automated manufacturing
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards



Mechanical Data

- Case: SMA molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated; solderable per MIL- STD-202, Method 208
- Polarity: Color band denotes cathode end

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

Parameter	Symbol	THES2DA	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	200	V
RMS Reverse Voltage	V_{RMS}	140	V
DC Blocking Voltage	V_{DC}	200	V
Average Forward Output Current	I_{F_AV}	2.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine wave	I_{FSM}	40	A

Thermal Characteristics

Parameter	Symbol	THES2DA	Unit
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	70	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	30	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	25	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 ~ +175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +175	$^\circ\text{C}$

Super-Fast Recovery Rectifier

THES2DA

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 50\mu\text{A}$	200	-	-	V
Forward Voltage *2	V_F	$I_F = 2\text{A}$	-	-	0.98	V
Maximum Peak Reverse Current *3	I_R	Rated V_R , $T_J = 25^\circ\text{C}$	-	-	5	μA
		Rated V_R , $T_J = 125^\circ\text{C}$	-	-	200	μA
Reverse Recovery Time	t_{rr}	$I_F = 0.5\text{A}$, $I_{rr} = 0.25\text{A}$, $I_R = 1\text{A}$	-	-	25	ns

Notes:

1. The data tested by surface mounted on p.c.b. with 10 mm x 20 mm x 0.1 mm 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 $\leq 40\text{ms}$

Super-Fast Recovery Rectifier

THES2DA

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

Fig.1 Forward Current Derating Curve

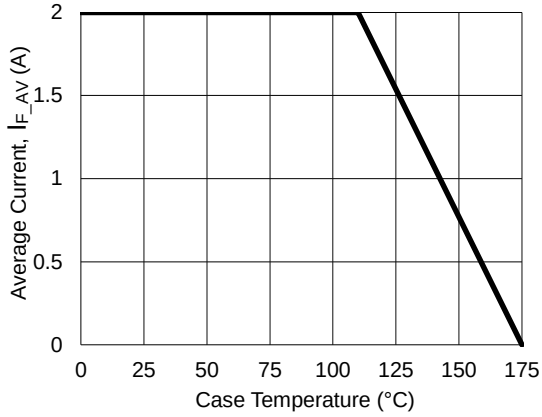


Fig.2 Surge Current Derating Curve

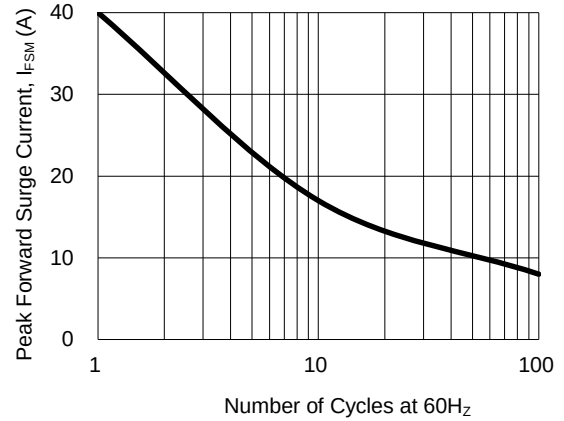


Fig.3 Typical Forward Voltage Characteristics

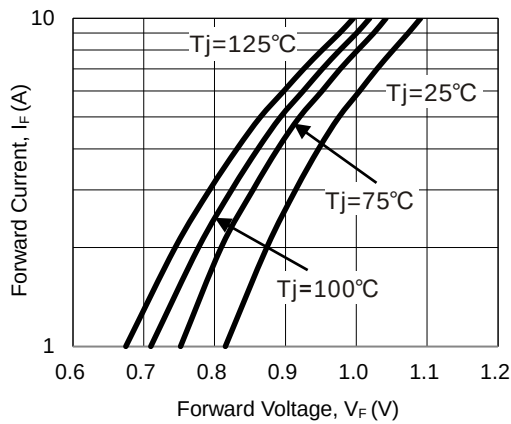
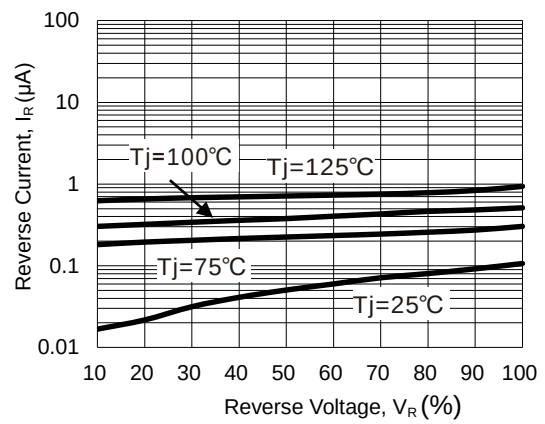


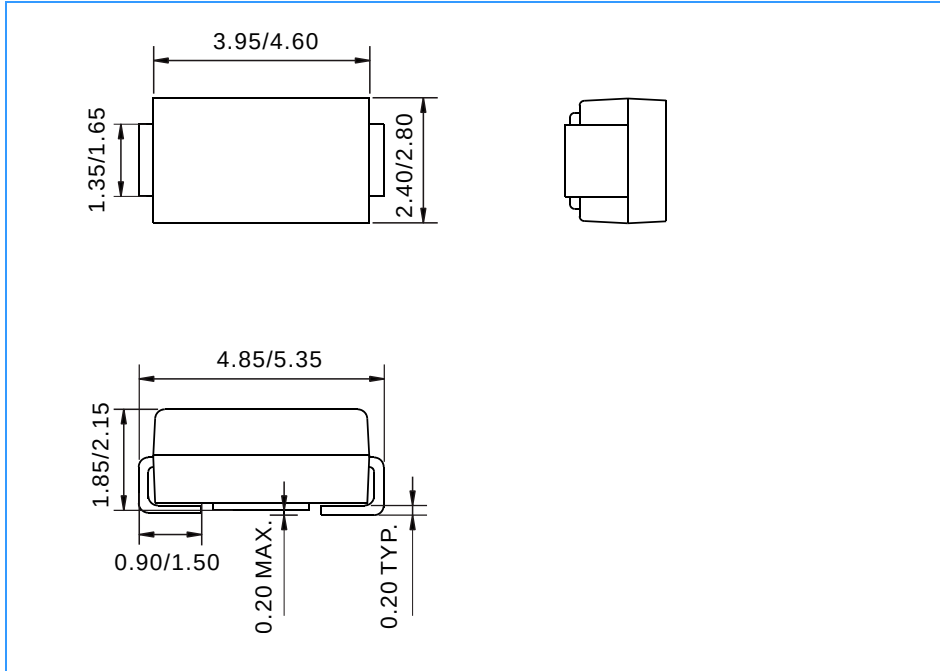
Fig.4 Typical Reverse Characteristics



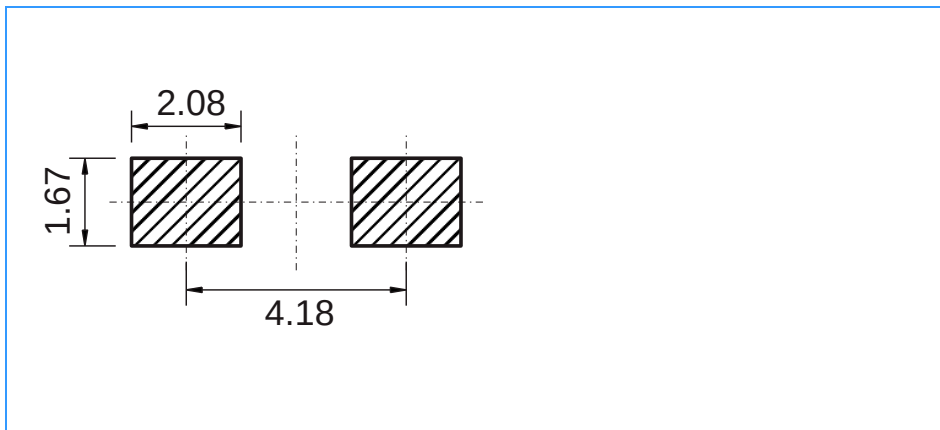
Super-Fast Recovery Rectifier

THES2DA

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
THES2DA	HES2DA	SMA	5000 pcs / Tape & Reel