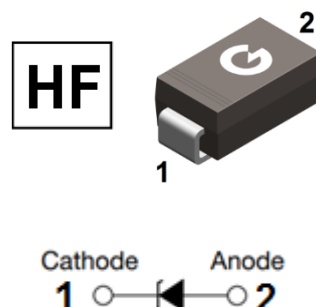


Super-Fast Recovery Rectifier

THES3BA - THES3DA

Features

- Glass passivated junction
- 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°C unless otherwise specified)

Parameter	Symbol	THES3BA	THES3DA	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	100	200	V
RMS Reverse Voltage	V _{RMS}	70	140	V
DC Blocking Voltage	V _{DC}	100	200	V
Average Forward Output Current	I _{F_AV}	3.0		A
Peak Forward Surge Current, 8.3ms Single Half Sine wave	I _{FSM}	100		A

Thermal Characteristics

Parameter	Symbol	THES3BA	THES3DA	Unit
Typical Thermal Resistance *1	R _{θJA}	70		°C/W
	R _{θJC}	25		
	R _{θJL}	30		
Operating Junction Temperature Range	T _J	-55 ~ +175		°C
Storage Temperature Range	T _{STG}	-55 ~ +175		°C

Note *1: Device mounted on p.c.b. with 10 mm x 20 mm x 0.1mm copper pad area

Super-Fast Recovery Rectifier

THES3BA - THES3DA

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R = 50\mu\text{A}$, THES3BA	100	-	-	V
		$I_R = 50\mu\text{A}$, THES3DA	200	-	-	V
Forward Voltage	V_F	$I_F = 3\text{A}$	-	-	0.98	V
Maximum Peak Reverse Current	I_R	Rated V_R , $T_J = 25^\circ\text{C}$	-	-	5	μA
		Rated V_R , $T_J = 125^\circ\text{C}$	-	-	300	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

Super-Fast Recovery Rectifier

THES3BA - THES3DA

Ratings and Characteristic Curves (@T_A=25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

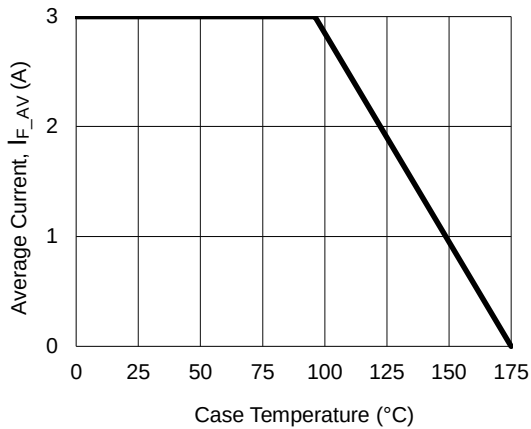


Fig.2 Surge Current Derating Curve

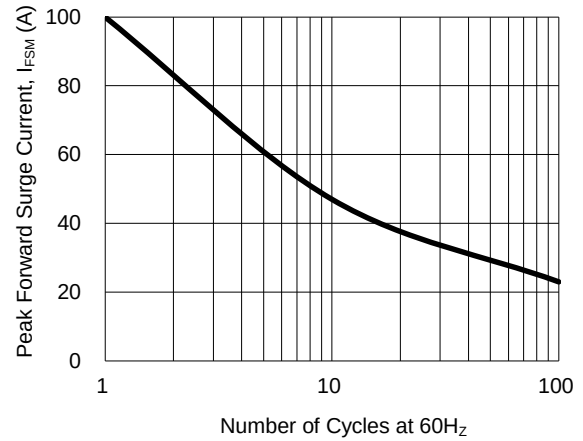


Fig.3 Typical Forward Voltage Characteristics

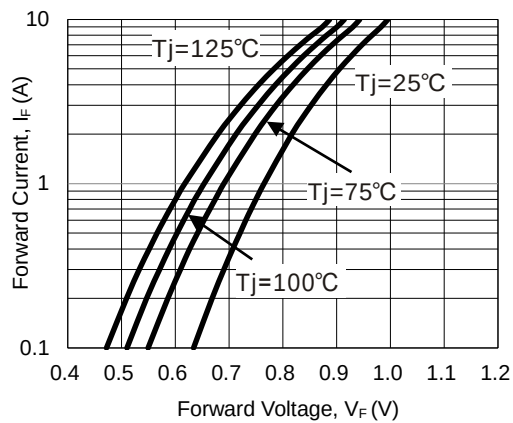
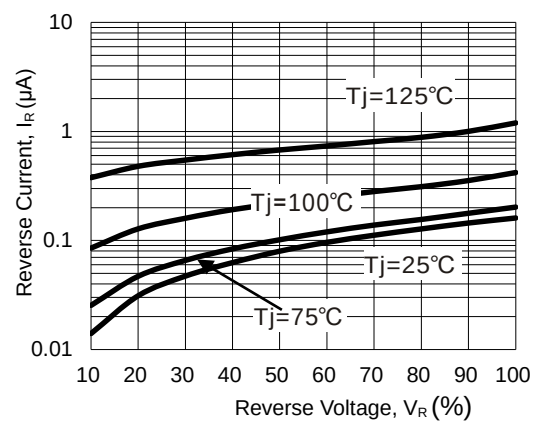


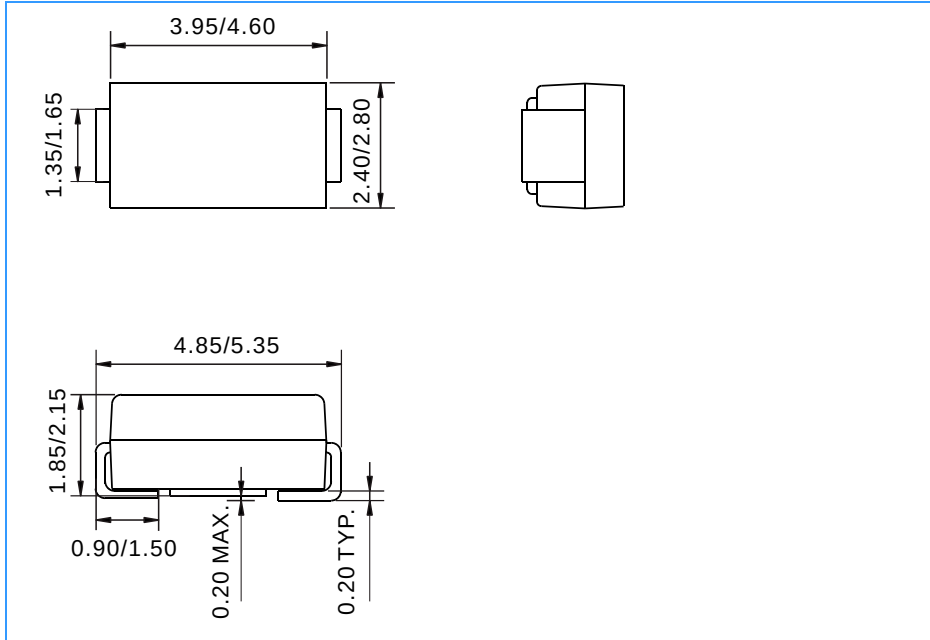
Fig.4 Typical Reverse Characteristics



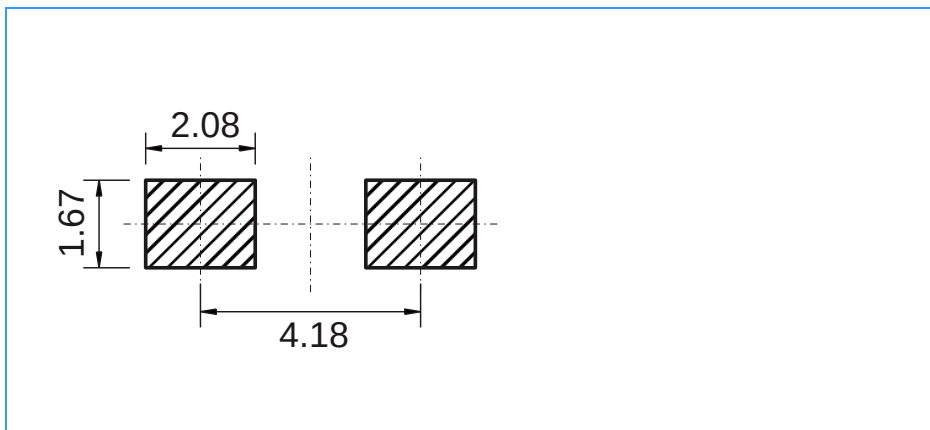
Super-Fast Recovery Rectifier

THES3BA - THES3DA

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Marking	Package	Shipping Quantity
THES3BA	HES3BA	SMA	5000 pcs / Tape & Reel
THES3DA	HES3DA	SMA	5000 pcs / Tape & Reel