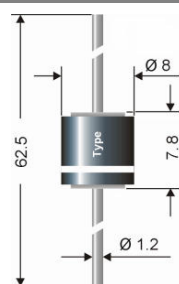


HE25FA ... HE25FG



Axial lead diode

High efficiency fast silicon rectifier diode

HE25FA ... HE25FG

Forward Current: 25 A

Reverse Voltage: 50 to 400 V

Preliminary Data

Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0

Mechanical Data

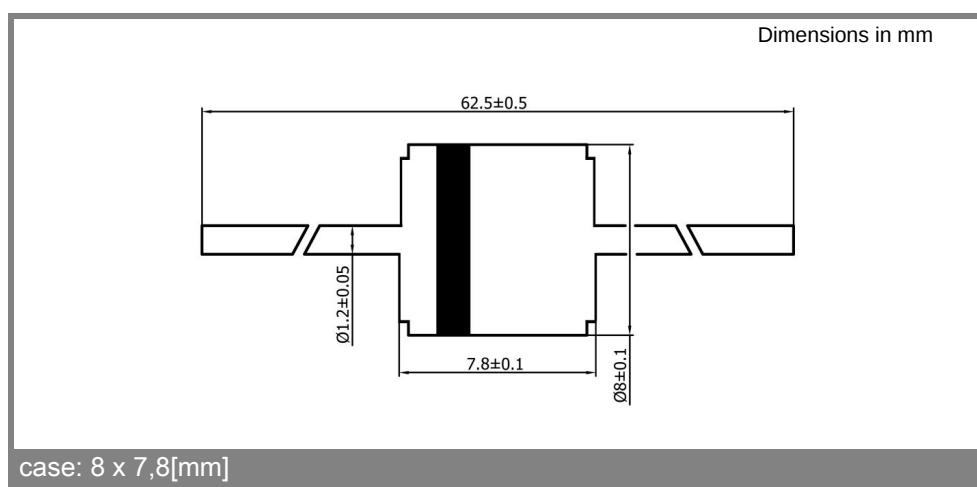
- Plastic case: 8 x 7,8 [mm]
- Weight approx.: 2,4 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 500 pieces per ammo or 1000 pieces per reel

- 1) Valid, if leads are kept at ambient temperature at distance of 0 mm from case
- 2) $I_F = 5 \text{ A}$, $T_J = 25^\circ\text{C}$
- 3) $T_A = 25^\circ\text{C}$
- 4) Thermal resistance from junction to lead/terminal at a distance 0 mm from case
- 5) Max. junction temperature $T_J \leq 185^\circ\text{C}$ in reverse mode $V_R = 50\% V_{RRM}$, $T_J \leq 200^\circ\text{C}$ in bypass mode

Type	Repetitive peak reverse voltage V_{RRM} V	Surge peak reverse voltage V_{RSM} V	Max. reverse recovery time $I_F = -A$ $I_R = -A$ $I_{RR} = -A$ t_{rr} ns	Max. forward voltage $V_F^{2)}$
HE 25FA	50	50	200	0,82
HE 25FB	100	100	200	0,82
HE 25FD	200	200	200	0,82
HE 25FG	400	400	200	0,82

Absolute Maximum Ratings		$T_A = 25^\circ\text{C}$, unless otherwise specified	
Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, $T_A = 50^\circ\text{C}^{1)}$	25	A
I_{FRM}	Repetitive peak forward current $f > 15 \text{ Hz}^{1)}$	85	A
I_{FSM}	Peak forward surge current 50 Hz half sinus-wave $^{3)}$	700	A
i^2t	Rating for fusing, $t < 10 \text{ ms}^{3)}$	2450	A^2s
R_{thA}	Max. thermal resistance junction to ambient $^{1)}$		K/W
R_{thL}	Max. thermal resistance junction to terminals $^{4)}$	0,8	K/W
T_J	Operating junction temperature	- 50 ... + 175 ($T_J \leq 200^\circ\text{C}^{5)}$	$^\circ\text{C}$
T_s	Storage temperature	- 50 ... + 175	$^\circ\text{C}$

Characteristics		$T_A = 25^\circ\text{C}$, unless otherwise specified	
Symbol	Conditions	Values	Units
I_R	Maximum leakage current, $T_J = 25^\circ\text{C}$; $V_R = V_{RRM}$	<25	μA
	$T_J = ^\circ\text{C}$; $V_R = V_{RRM}$	-	
C_J	Typical junction capacitance (at MHz and applied reverse voltage of V)	-	pF
Q_{rr}	Reverse recovery charge ($U_R = V$; $I_F = A$; $dI_F/dt = \text{A/ms}$)	-	μC
E_{RSM}	Non repetitive peak reverse avalanche energy ($I_R = \text{mA}$; $T_J = ^\circ\text{C}$; inductive load switched off)	-	mJ



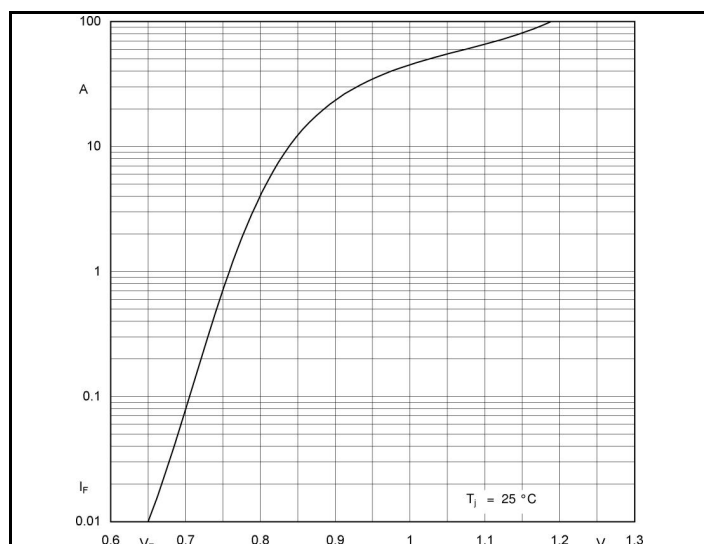


Fig. 1 Forward characteristics (typical values)

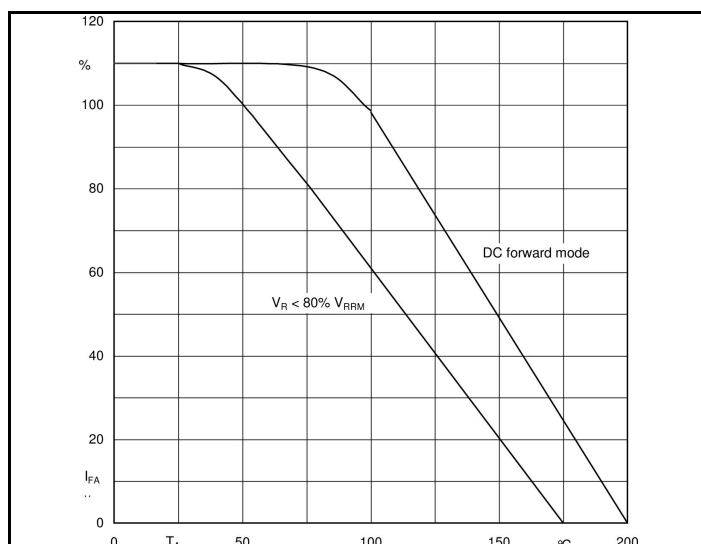


Fig. 2 Rated forward current vs. ambient temperature 1)

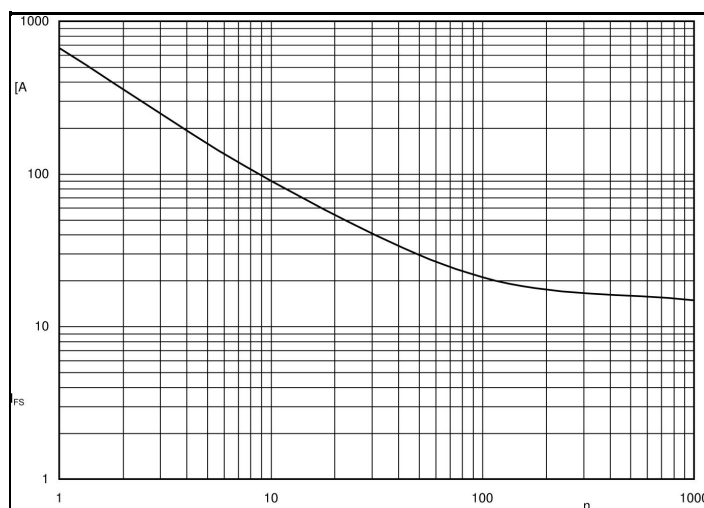


Fig. 4 I_{FSM} current versus number of cycles at 50 Hz

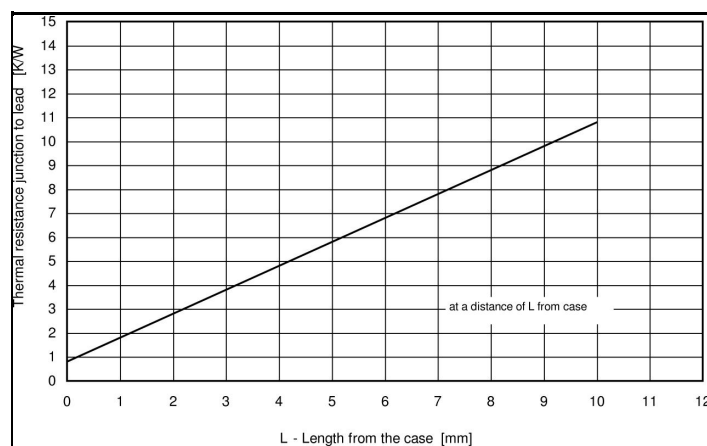


Fig. 4 Thermal resistance versus distance from case