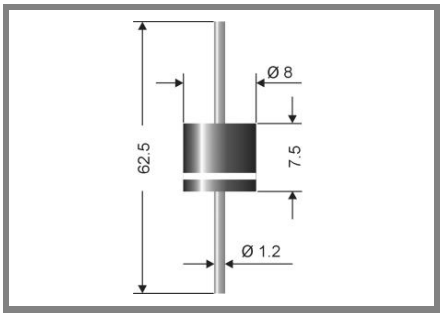
HE 12FA ... HE 12FG



Axial lead diode

Type	Repetitive peak reverse voltage V_{RRM} V	Surge peak reverse voltage V_{RSM} V	Max. reverse recovery time I_F = 0,5 A, I_R = 1 A, I_{RR} = 0,25 A t_{rr} ns	Max. forward voltage V_F [2]
HE 12FA	50	50	200	0,82
HE 12FB	100	100	200	0,82
HE 12FD	200	200	200	0,82
HE 12FG	400	400	200	0,82

High efficiency fast silicon rectifier diode

HE 12FA...HE 12FG

Forward Current: 12 A

Reverse Voltage: 50 to 400 V

Features

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

Mechanical Data

- Plastic case 8 x 7,5 [mm]
- Weight approx.: 1,5 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 500 pieces per ammo

1) Valid, if leads are kept at ambient temperature at a distance of 10 mm from case
2) I_F = 5 A, T_J = 25 °C
3) T_A = 25 °C

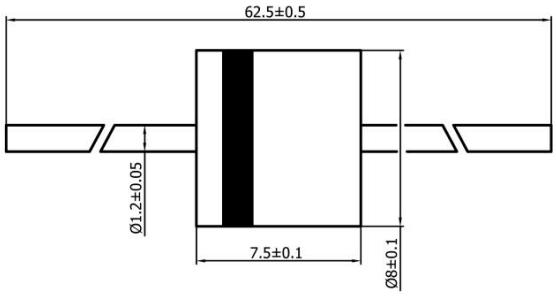
Absolute Maximum Ratings T_A = 25 °C, unless otherwise specified

Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, T_A = 50 °C [1]	12	A
I_{FRM}	Repetitive peak forward current f > 15 Hz [1]	80	A
I_{FSM}	Peak forward surge current 50 Hz half sinus-wave [3]	375	A
i²t	Rating for fusing, t < 10 ms [3]	680	A²s
R_{thA}	Max. thermal resistance junction to ambient [1]	12	K/W
R_{thL}	Max. thermal resistance junction to terminals [4]	-	K/W
T_j	Operating junction temperature	-50...+150	°C
T_s	Storage temperature	-50...+175	°C

Characteristics T_A = 25 °C, unless otherwise specified

Symbol	Conditions	Values	Units
I_R	Maximum leakage current, T_j = 25 °C; V_R = V_{RRM}	<25	µA
	T_j = °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 = A/ms)	-	µC
E_{RSM}	Non repetitive peak reverse avalanche energy (I_R = mA; T_j = °C; inductive load switched off)	-	mJ

Dimensions in mm



case: 8 x 7,5 [mm]

 © by SEMIKRON

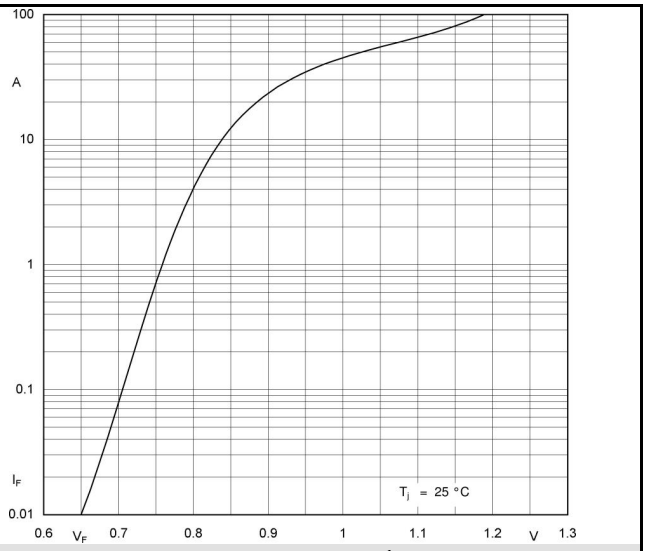


Fig. 1 Forward characteristic (typical values) [1])

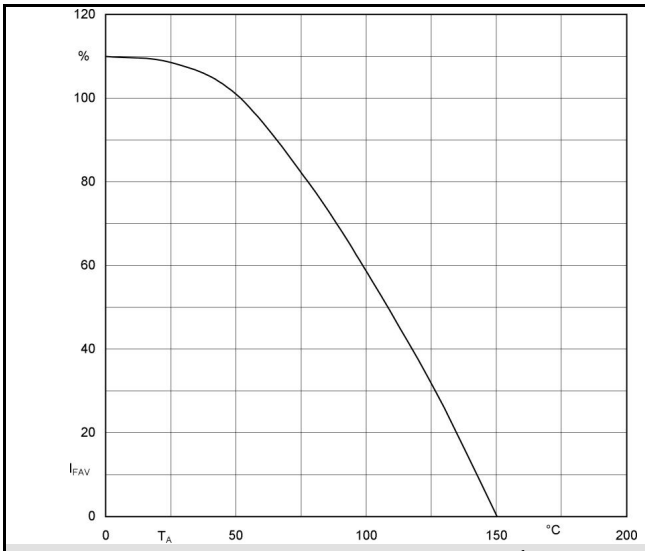


Fig. 2 Rated forward current vs. ambient temperature [1])

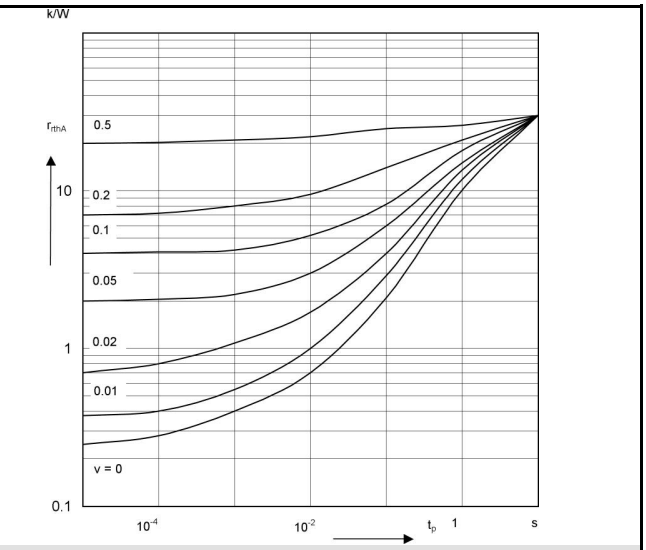


Fig. 3 Pulse thermal resistance vs. pulse duration [1])

 © by SEMIKRON