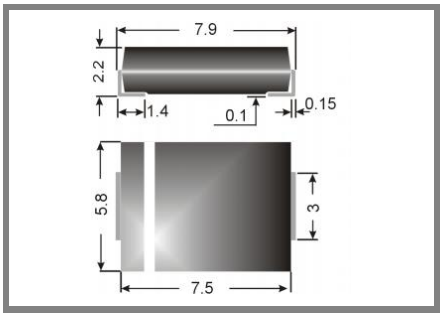
FRA 3A ... FRA 3M



Surface mount diode

Fast Avalanche Diodes

FRA 3A ... FRA 3M

Forward Current: 3 A

Reverse Voltage: 50 to 1000 V

Features

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

Mechanical Data

- Plastic case: SMC / DO-214AB
- Weight approx.: 0,21 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 3000 pieces per reel

1) Max. temperature of the terminals T_T = 100 °C
2) I_F = 3 A, T_J = 25 °C
3) T_A = 25 °C
4) Mounted on P.C. board with 50 mm² copper pads at each terminal

Type	Polarity color band	Repetitive peak reverse voltage V_{RRM} V	Surge peak reverse voltage V_{RSM} V	Maximum forward voltage T_j = 25 °C I_F = 3 A V_F 2) V	Maximum reverse recovery time I_F = 0,5 A I_R = 1 A I_{RR} = 0,25 A t_{rr} ns
FRA 3A	-	50	50	1,3	150
FRA 3B	-	100	100	1,3	150
FRA 3D	-	200	200	1,3	150
FRA 3G	-	400	400	1,3	150
FRA 3J	-	600	600	1,3	250
FRA 3K	-	800	800	1,3	500
FRA 3M	-	1000	1000	1,3	500

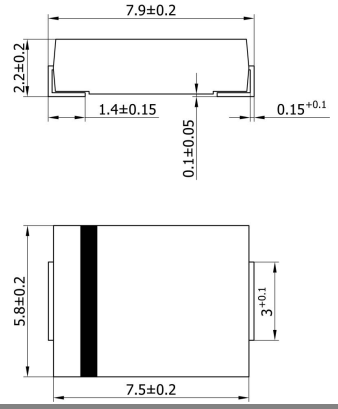
Absolute Maximum Ratings T_A = 25 °C, unless otherwise specified

Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, T_T = 100 °C 1)	3	A
I_{FRM}	Repetitive peak forward current f > 15 Hz 1)	15	A
I_{FSM}	Peak fwd. surge current 50 Hz half sinus-wave 3)	100	A
I^2t	Rating for fusing, t < 10 ms 3)	50	A²s
R_{thA}	Max. thermal resistance junction to ambient 4)	50	K/W
R_{thT}	Max. thermal resistance junction to terminals	10	K/W
T_j	Operating junction temperature	- 50 ... + 150	°C
T_s	Storage temperature	- 50 ... + 150	°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} T_j = °C; V_R = V_{RRM}	<3	µA
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 (L = 40 mH; T_j = 25 °C; inductive load switched off)	20	mJ

Dimensions in mm



case: SMC / DO-214AB

 © by SEMIKRON

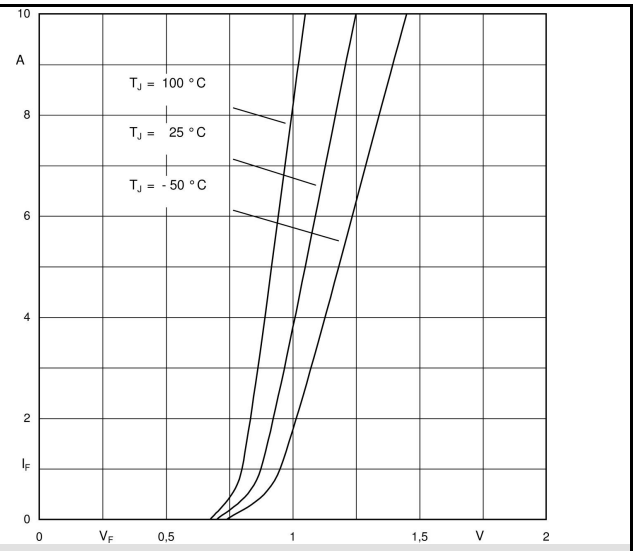


Fig. 1 Forward characteristics (typical values)

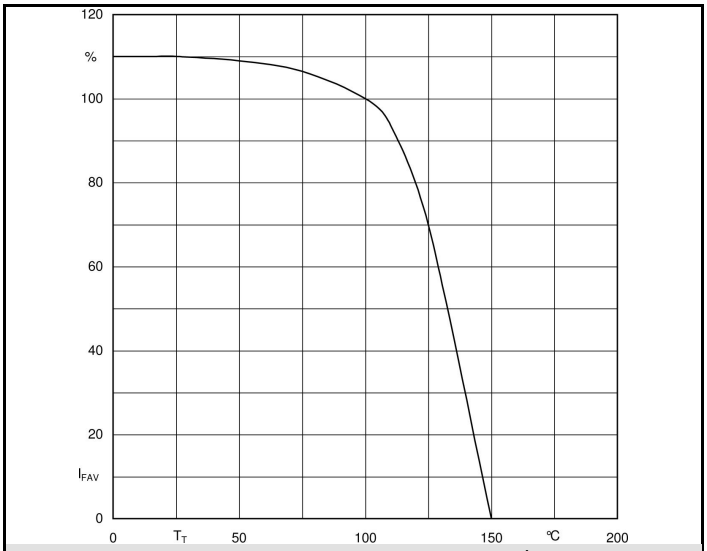


Fig. 2 Rated forward current vs. temp. of the terminals[4])

 © by SEMIKRON