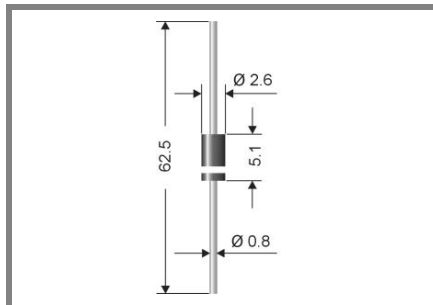


EM 513, EM 516, EM 518



Axial lead diode

Standard silicon rectifier diodes

EM 513, EM 516, EM 518

Forward Current: 1 A

Reverse Voltage: 1600 to 2000 V

Features

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

Mechanical Data

- Plastic case DO-41 / DO-204AL
- Weight approx.: 0.4 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 5000 pieces per ammo

1) Valid, if leads are kept at ambient temperature at a distance of 10 mm from case

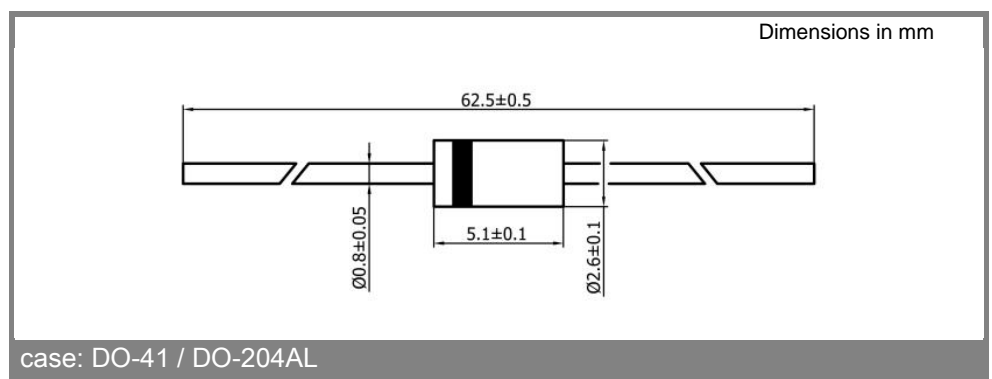
2) $I_F = 1A$, $T_j = 25^\circ C$

3) $T_A = 25^\circ C$

Type	Repetitive peak reverse voltage	Surge peak reverse voltage	Max. reverse recovery time	Max. forward voltage
	V_{RRM} V	V_{RSM} V	$I_F = - A$ $I_R = - A$ $I_{RR} = - A$ t_{rr} ns	$V_F^{2)}$
EM 513	1600	1600	-	1,1
EM 516	1800	1800	-	1,1
EM 518	2000	2000	-	1,1

Absolute Maximum Ratings		Tc = 25 °C, unless otherwise specified	
Symbol	Conditions	Values	Units
I_{FAV}	Max. averaged fwd. current, R-load, $T_A = 75^\circ C$ ¹⁾	1	A
I_{FRM}	Repetitive peak forward current $f > 15 Hz$ ¹⁾	10	A
I_{FSM}	Peak forward surge current 50 Hz half sinus-wave ³⁾	50	A
i^2t	Rating for fusing, $t < 10 ms$ ³⁾	12,5	A ² s
R_{thA}	Max. thermal resistance junction to ambient ¹⁾	45	K/W
R_{thT}	Max. thermal resistance junction to terminals ¹⁾	-	K/W
T_j	Operating junction temperature	-50...+175	°C
T_s	Storage temperature	-50...+175	°C

Characteristics		Tc = 25 °C, unless otherwise specified	
Symbol	Conditions	Values	Units
I_R	Maximum leakage current, $T_j = 25^\circ C$; $V_R = V_{RRM}$	<5	µA
	$T_j = 100^\circ C$; $V_R = V_{RRM}$	<50	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 ($I_R = mA$; $T_j = ^\circ C$; inductive load switched off)	-	mJ



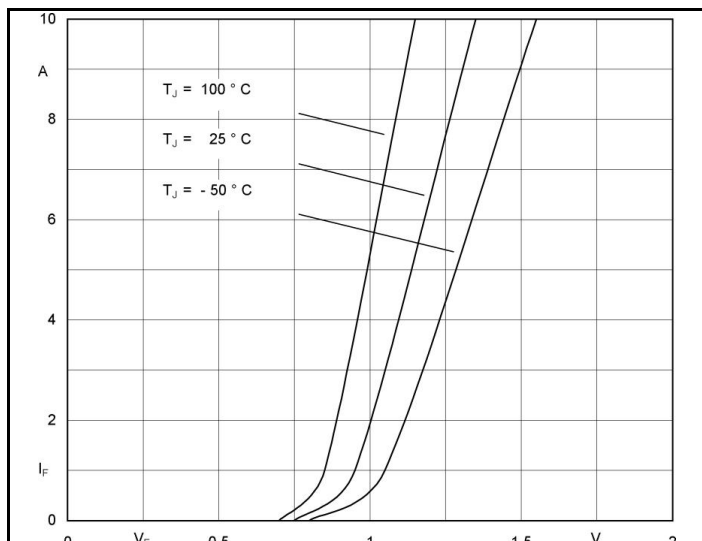


Fig. 1 Forward characteristics (typical values)

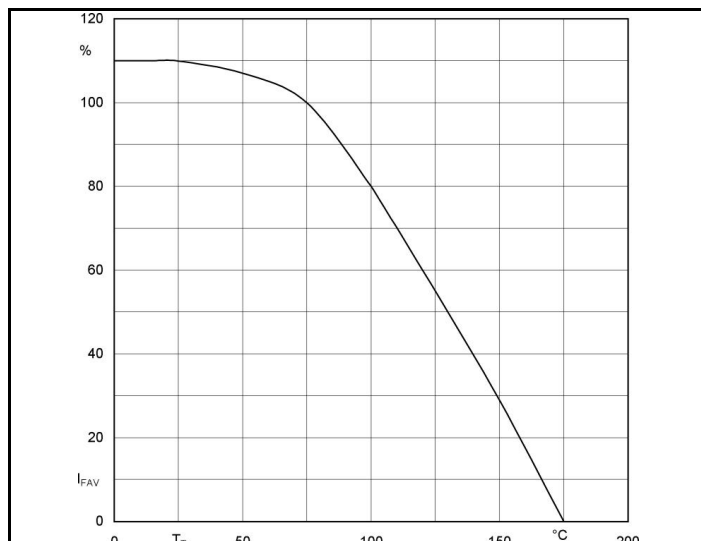


Fig. 2 Rated forward current vs. ambient temperature ¹⁾

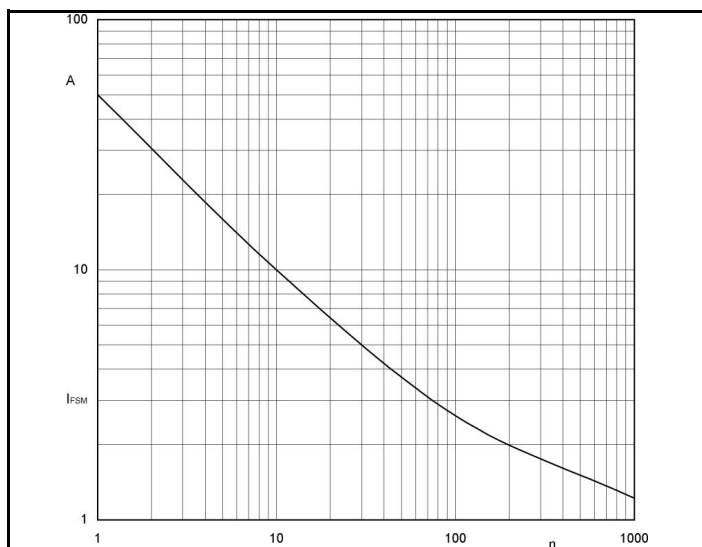


Fig. 3 I_{FSM} current versus number of cycles at 50 Hz