

## Axial lead diode

### Standard silicon rectifier diodes

BY 133...BY 135

Forward Current: 1 A

Reverse Voltage: 150 to 1300 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

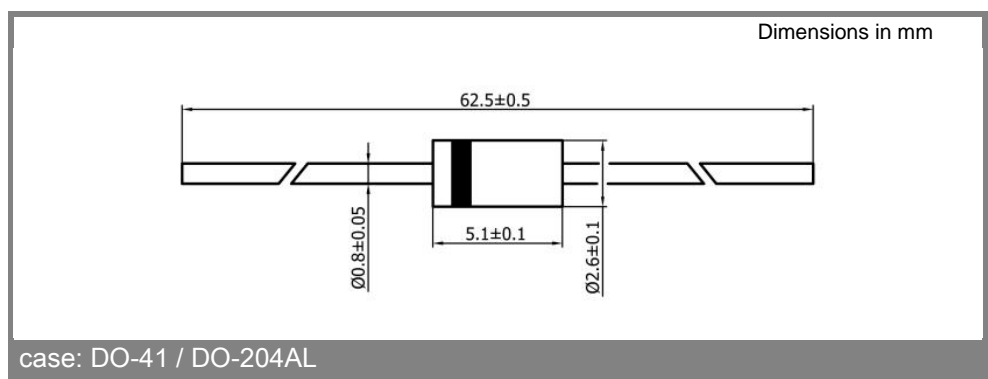
2)  $I_F = 1 \text{ A}$ ,  $T_j = 25 \text{ °C}$

3)  $T_A = 25 \text{ °C}$

Type	Repetitive peak reverse voltage	Surge peak reverse voltage	Max. reverse recovery time	Max. forward voltage
	$V_{RRM}$ V	$V_{RSM}$ V	$I_F = - \text{A}$ $I_R = - \text{A}$ $I_{RR} = - \text{A}$ $t_{rr}$ ns	$V_F^{2)}$
BY 133	1300	1600	-	1,3
BY 134	600	800	-	1,3
BY 135	150	200	-	1,3

Absolute Maximum Ratings		Tc = 25 °C, unless otherwise specified	
Symbol	Conditions	Values	Units
$I_{FAV}$	Max. averaged fwd. current, R-load, $T_A = 50 \text{ °C}^1)$	1	A
$I_{FRM}$	Repetitive peak forward current $f > 15 \text{ Hz}^1)$	10	A
$I_{FSM}$	Peak forward surge current 50 Hz half sinus-wave $^3)$	50	A
$i^2t$	Rating for fusing, $t < 10 \text{ ms}^3)$	12,5	A <sup>2</sup> 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, $T_j = 25 \text{ °C}$ ; $V_R = V_{RRM}$	<5	µA
	$T_j = 100 \text{ °C}$ ; $V_R = V_{RRM}$	<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 ( $I_R = \text{mA}$ ; $T_j = \text{°C}$ ; inductive load switched off)	-	mJ



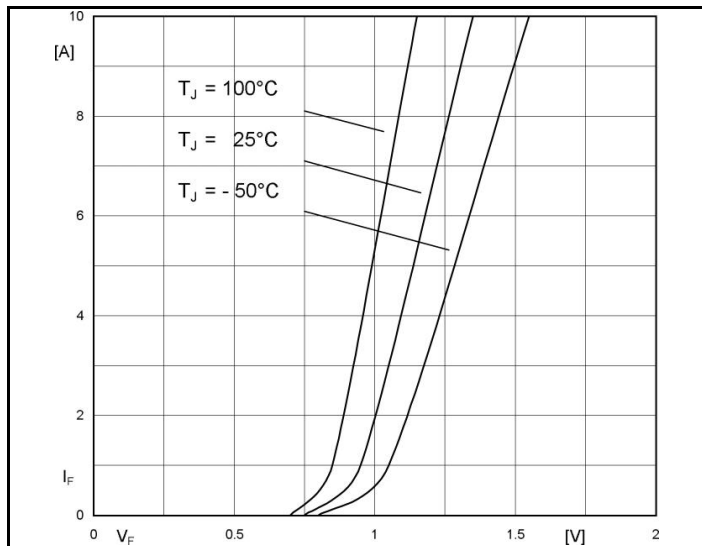


Fig. 1 Forward characteristic ( typical values )

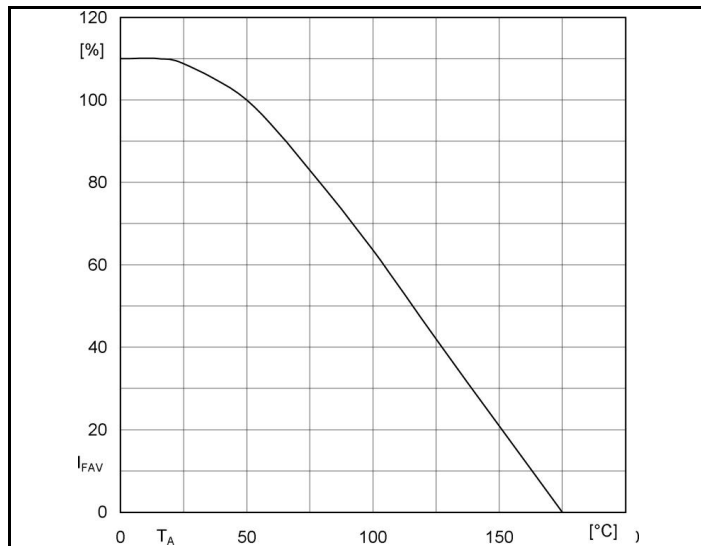


Fig. 2 Rated forward current vs. ambient temperature <sup>1)</sup>

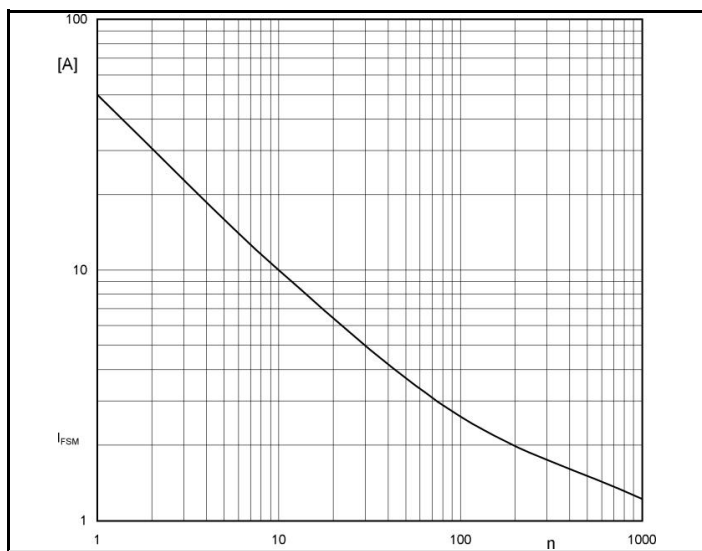


Fig. 3  $I_{FSM}$  current versus number of cycles at 50 Hz