

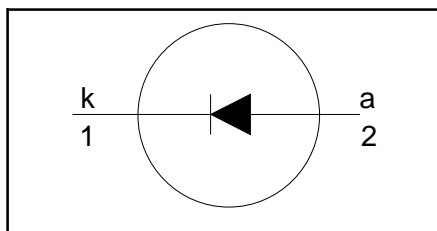
**Rectifier diodes  
general purpose**

**BY249 series**

**FEATURES**

- Low forward volt drop
- High thermal cycling performance
- Low thermal resistance

**SYMBOL**



**QUICK REFERENCE DATA**

$V_R = 300\text{ V} / 600\text{ V} / 800\text{ V}$
$V_F \leq 1.05\text{ V}$
$I_{F(AV)} = 7\text{ A}$
$I_{FSM} \leq 60\text{ A}$

**GENERAL DESCRIPTION**

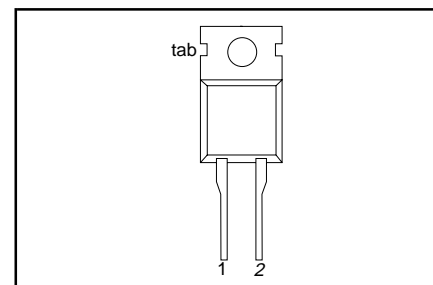
Glass-passivated double diffused rectifier diodes. The devices are intended for low frequency power rectifier applications.

The BY249 series is supplied in the conventional leaded SOD59 (TO220AC) package.

**PINNING**

PIN	DESCRIPTION
1	cathode
2	anode
tab	cathode

**SOD59 (TO220AC)**



**LIMITING VALUES**

Limiting values in accordance with the Absolute Maximum System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.UNIT			UNIT
				-300	-600	-800	
$V_{RSM}$	Peak non-repetitive reverse voltage	<b>BY249</b>	-	300	600	800	V
$V_{RRM}$	Peak repetitive reverse voltage		-	300	600	800	V
$V_{RWM}$	Crest working reverse voltage		-	200	500	700	V
$V_R$	Continuous reverse voltage		-	200	500	700	V
$I_{F(AV)}$	Average forward current <sup>1</sup>	sinusoidal; $a = 1.57$ ; $T_{mb} \leq 131\text{ °C}$	-	7			A
$I_{F(RMS)}$	RMS forward current	sinusoidal; $a = 1.57$ ;	-	11			A
$I_{FRM}$	Peak repetitive forward current		-	60			A
$I_{FSM}$	Peak non-repetitive forward current.		$t = 10\text{ ms}$	-	60		
		$t = 8.3\text{ ms}$	-	66			A
		sinusoidal; $T_j = 150\text{ °C}$ prior to surge; with reapplied $V_{RWM(max)}$					
$I^2t$	$I^2t$ for fusing	$t = 10\text{ ms}$	-	18			A <sup>2</sup> s
$T_{stg}$	Storage temperature		-40	150			°C
$T_j$	Operating junction temperature		-	150			°C

<sup>1</sup> Neglecting switching and reverse current losses.

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**THERMAL RESISTANCES**

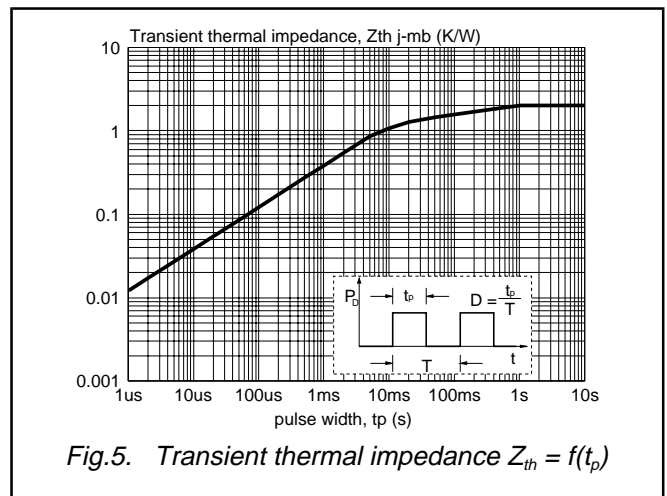
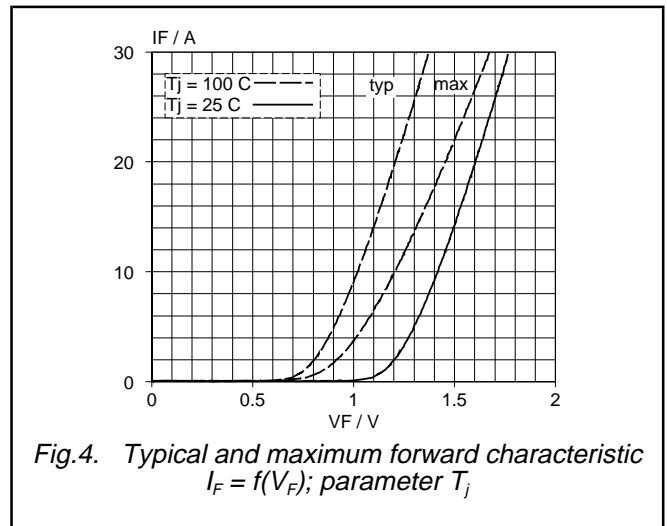
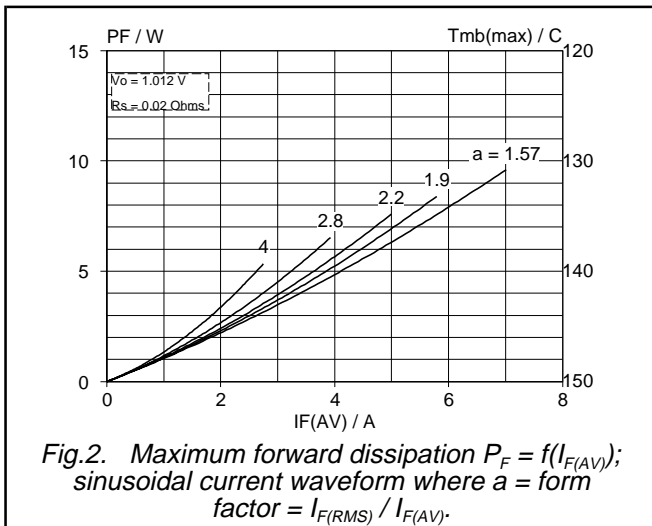
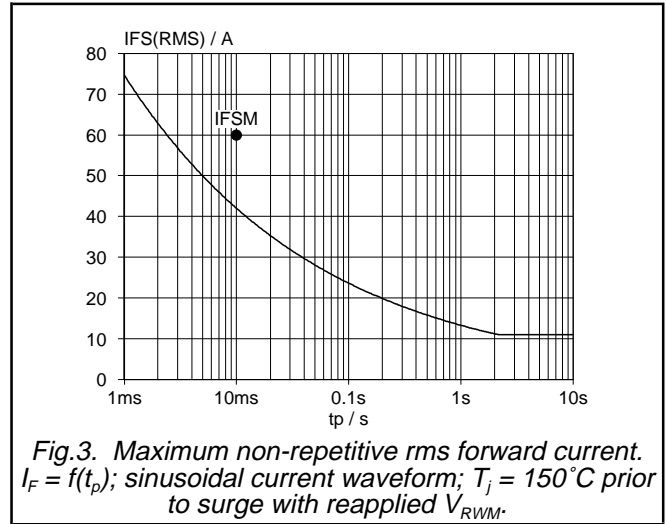
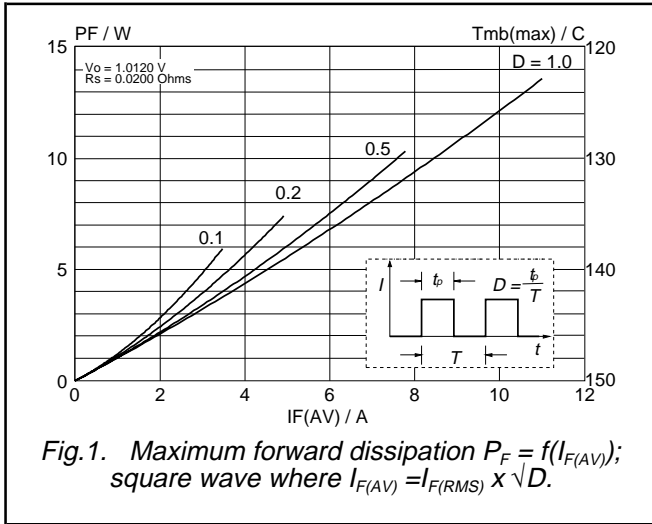
SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$R_{th\ j-mb}$	Thermal resistance junction to mounting base	in free air.	-	-	2.0	K/W
$R_{th\ j-a}$	Thermal resistance junction to ambient		-	60	-	K/W

**STATIC CHARACTERISTICS** $T_j = 25\text{ °C}$  unless otherwise stated

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$V_F$	Forward voltage	$I_F = 20\text{ A}$	-	1.2	1.6	V
$I_R$	Reverse current	$I_F = 5\text{ A}; T_j = 100\text{ °C}$	-	0.9	1.05	V
		$V_R = V_{RWM}; T_j = 125\text{ °C}$	-	0.1	0.4	mA

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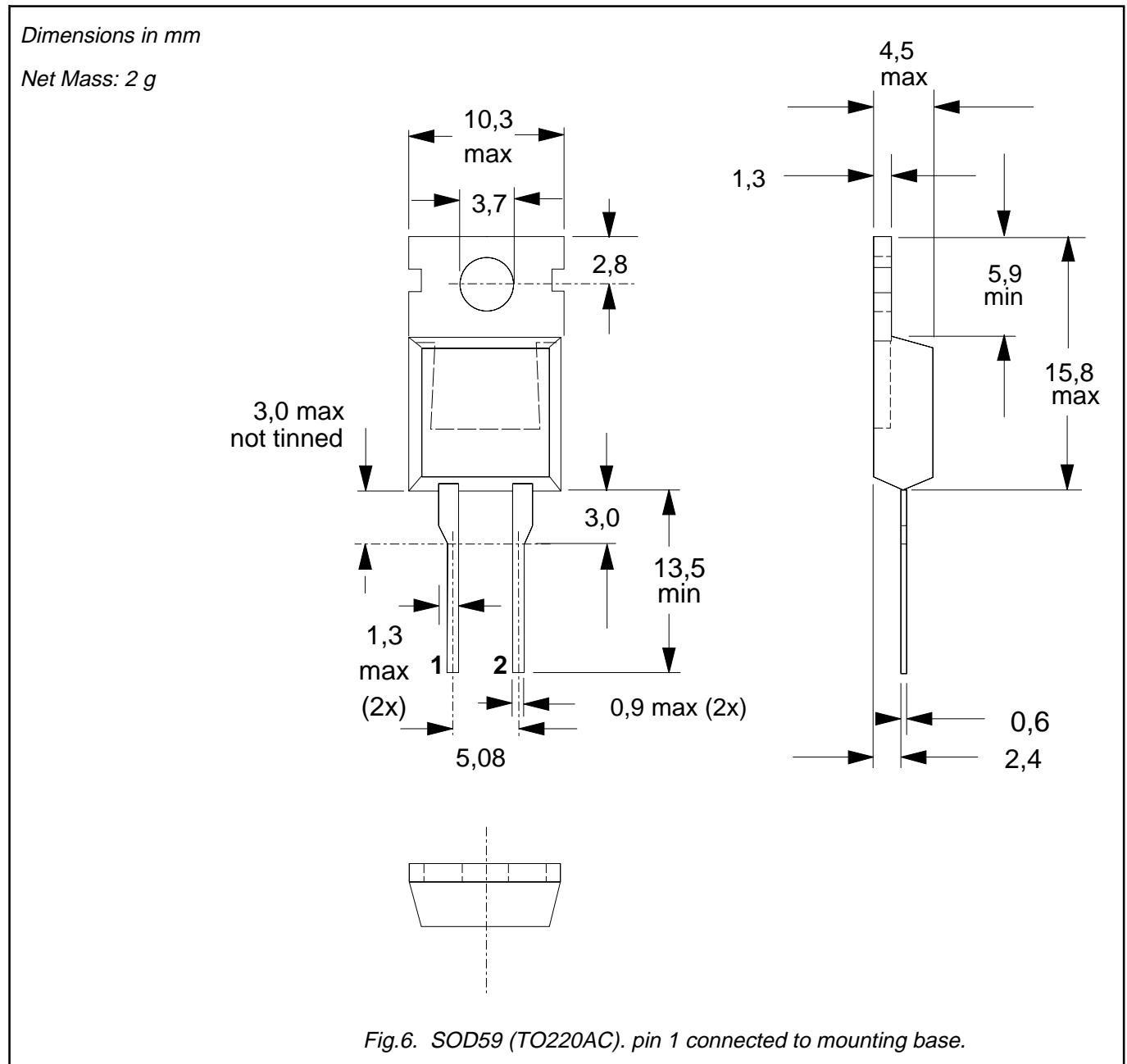
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**MECHANICAL DATA**



**Notes**

1. Refer to mounting instructions for TO220 envelopes.
2. Epoxy meets UL94 V0 at 1/8".

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**BY249 series****DEFINITIONS**

<b>Data sheet status</b>	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
<b>Limiting values</b>	
Limiting values are given in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of this specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	
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**LIFE SUPPORT APPLICATIONS**

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