

Rectifier diodes general purpose

BY249 series

GENERAL DESCRIPTION

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

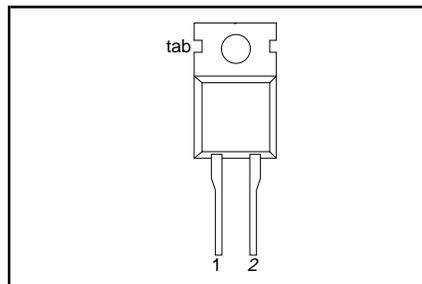
QUICK REFERENCE DATA

SYMBOL	PARAMETER	MAX.	MAX.	UNIT
	BY249	-300	-600	
V_{RRM}	Repetitive peak reverse voltage	300	600	V
$I_{F(AV)}$	Average forward current	7	7	A
I_{FSM}	Non-repetitive peak forward current	60	60	A

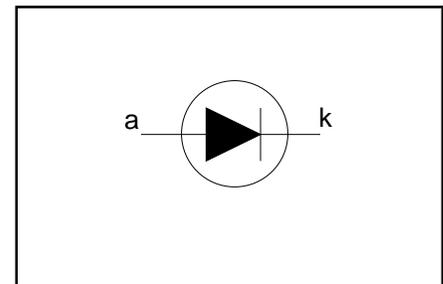
PINNING - TO220AC

PIN	DESCRIPTION
1	cathode (k)
2	anode (a)
tab	cathode (k)

PIN CONFIGURATION



SYMBOL



LIMITING VALUES

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

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

THERMAL RESISTANCES

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

¹ Neglecting switching and reverse current losses.

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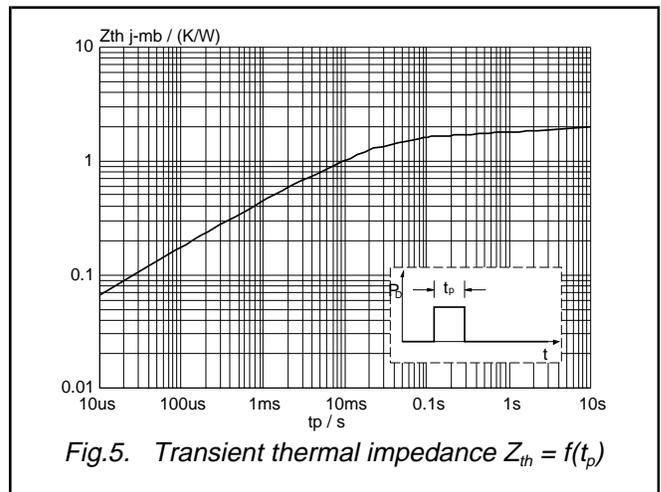
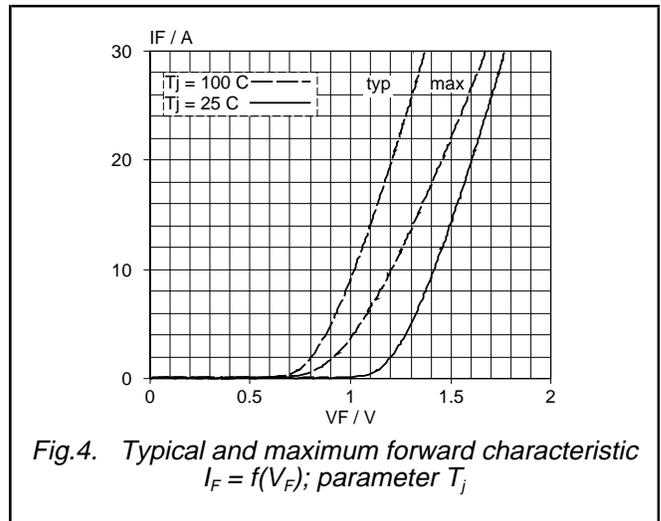
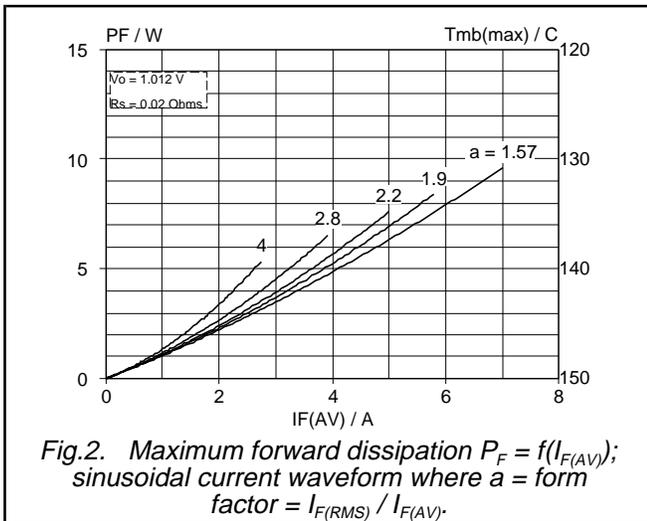
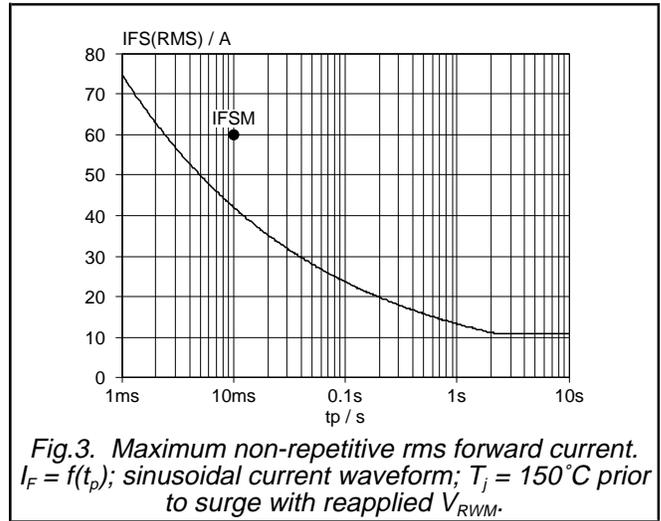
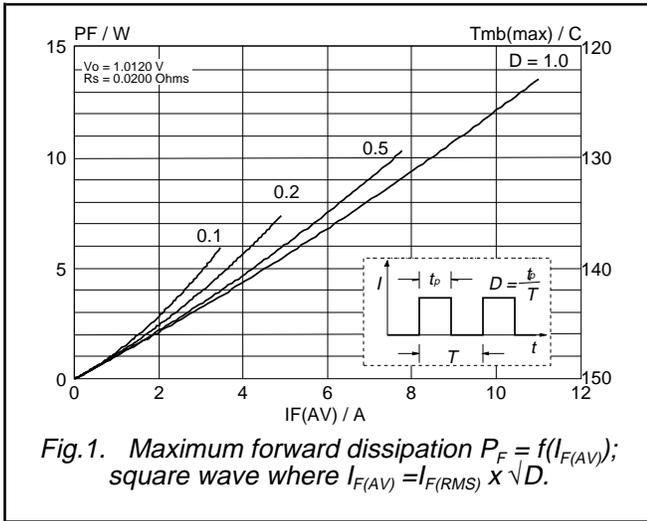
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STATIC CHARACTERISTICS $T_j = 25\text{ °C}$ unless otherwise stated

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

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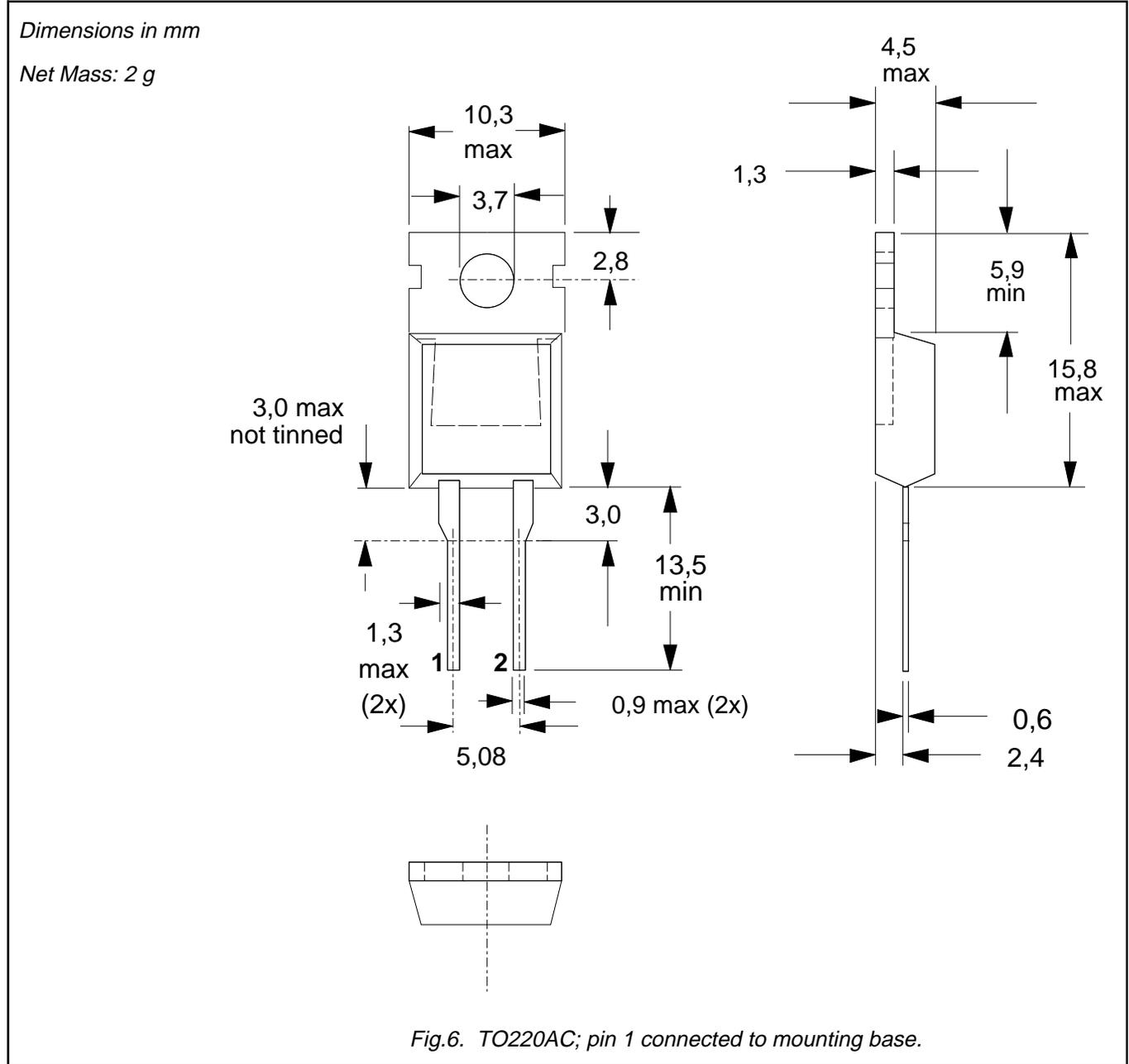
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MECHANICAL DATA



Notes

1. Accessories supplied on request: refer to mounting instructions for TO220 envelopes.
2. Epoxy meets UL94 V0 at 1/8".

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DEFINITIONS

Data sheet status	
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.
Limiting values	
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.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	
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