Rectifier diode fast, high-voltage

BY459F-1500

GENERAL DESCRIPTION

Glass-passivated double diffused rectifier diode in a full pack plastic envelope, featuring fast forward recovery and low forward recovery voltage. The device is intended for use in multi-sync monitor horizontal deflection circuits.

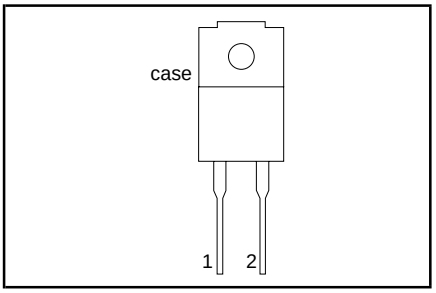
QUICK REFERENCE DATA

SYMBOL	PARAMETER	MAX.	UNIT
V_{RRM}	Repetitive peak reverse voltage	1500	V
V_F	Forward voltage	1.2	V
I_{FWM}	Working peak forward current	10	A
I_{FRM}	Repetitive peak forward current	100	A
t_{fr}	Forward recovery time	250	ns
V_{fr}	Forward recovery voltage	14	V

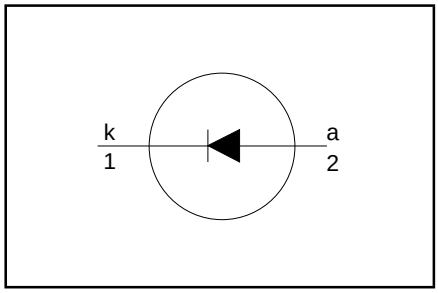
PINNING - SOD100

PIN	DESCRIPTION
1	cathode
2	anode
case	isolated

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 during flash-over of picture tube		-	1500	V
V_{RRM}	Repetitive peak reverse voltage	t = 6 μs; f = 82kHz	-	1500	V
V_{RWM}	Crest working reverse voltage		-	1300	V
I_{FWM}	Working peak forward current[1]	f = 82kHz; $T_{hs} \leq 127$ ˚C	-	10	A
I_{FRM}	Repetitive peak forward current	t = 100 μs	-	100	A
I_{FSM}	Non-repetitive peak forward current	t = 10 ms	-	100	A
		t = 8.3 ms	-	110	A
		sinusoidal; T_j = 150 ˚C prior to surge; with reapplied $V_{RWM(max)}$			
T_{stg}	Storage temperature		-40	150	˚C
T_j	Operating junction temperature		-	150	˚C

ISOLATION LIMITING VALUE & CHARACTERISTIC

T_{hs} = 25 ˚C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_{isol}	Repetitive peak voltage from both terminals to external heatsink	R.H. ≤ 65% ; clean and dustfree	-		1500	V
C_{isol}	Capacitance from cathode to external heatsink	f = 1 MHz	-	12	-	pF

1 Including worst case forward recovery losses, see fig:5.