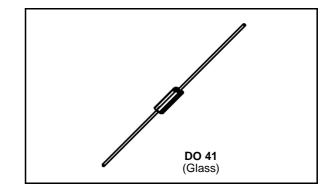


SMALL SIGNAL SCHOTTKY DIODE



DESCRIPTION

Metal to silicon rectifier diode in glass case featuring very low forward voltage drop and fast recovery time, intended for low voltage switching mode power supply, polarity protection and high frequency circuits.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	Value	Unit		
V_{RRM}	Repetitive Peak Reverse Voltage		60	V	
I _{F(AV)}	Average Forward Current*	T _{amb} = 25 °C	1	Α	
I _{FSM}	Surge non Repetitive Forward Current	$T_{amb} = 25^{\circ}C$ $t_p = 10ms$	20 Sinusoidal Pulse	А	
		$T_{amb} = 25$ °C $t_p = 300 \mu s$	40 Rectangular Pulse		
T _{stg} T _j	Storage and Junction Temperature Range		- 65 to + 150 - 65 to + 125	°C °C	
T _L	Maximum Lead Temperature for Soldering du from Case	230	°C		

THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
R _{th(j-a)}	Junction-ambient*	110	°C/W

^{*} On infinite heatsink with 4mm lead length

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ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Тур.	Max.	Unit
I _R *	T _j = 25°C	$V_R = V_{RRM}$			0.5	mA
	T _j = 100°C				10	
V _F *	I _F = 1A	T _j = 25°C			0.7	V
	I _F = 3A				1	

DYNAMIC CHARACTERISTICS

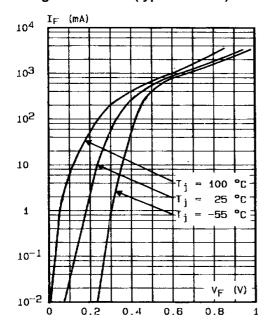
Symb	loc	Test Conditions	Min.	Тур.	Max.	Unit
С		$T_j = 25^{\circ}C$ $V_R = 0$		150		pF
		$T_j = 25^{\circ}C$ $V_R = 5V$		40		

^{*} Pulse test: $t_p \le 300 \mu s$ $\delta < 2\%$.

Forward current flow in a schottky rectifier is due to majority carrier conduction. So reverse recovery is not affected by stored charge as in conventional PN junction diodes.

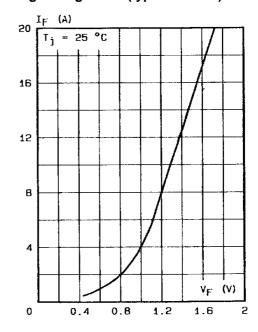
Nevertheless, when the device switches from forward biased condition to reverse blocking state, current is required to charge the depletion capacitance of the diode.

Figure 1. Forward current versus forward voltage at low level (typical values).



This current depends only of diode capacitance and external circuit impedance. Satisfactory circuit behaviour analysis may be performed assuming that schottky rectifier consists of an ideal diode in parallel with a variable capacitance equal to the junction capacitance (see fig. 5 page 4/4).

Figure 2. Forward current versus forward voltage at high level (typical values).



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Figure 3. Reverse current versus junction temperature.

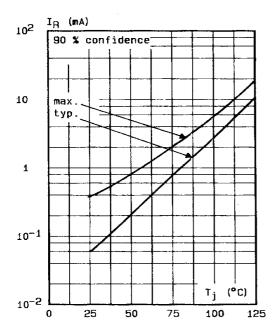


Figure 4. Reverse current versus $\ensuremath{V_{\text{RRM}}}$ in per cent.

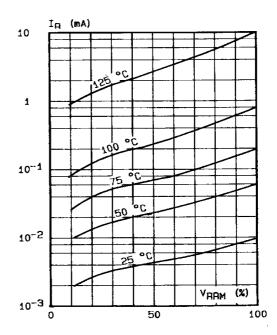


Figure 5. Capacitance C versus reverse applied voltage $V_{\mbox{\scriptsize R}}$ (typical values).

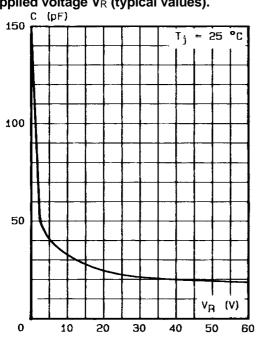


Figure 6. Surge non repetitive forward current for a rectangular pulse with t \leq 10 ms.

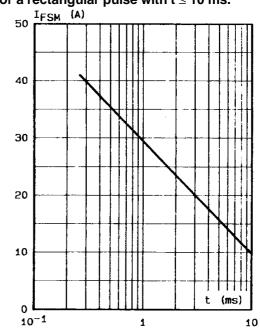
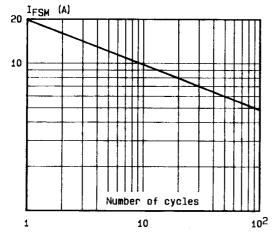
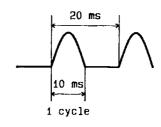


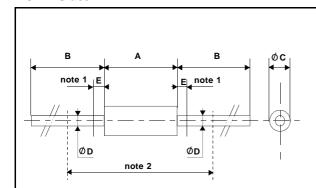
Figure 7. Surge non repetitive forward current versus number of cycles.





PACKAGE MECHANICAL DATA

DO 41 Glass



	DIMENSIONS				
REF.	Millimeters		Inches		
	Min.	Max.	Min.	Max.	
Α	4.07	5.20	0.160	0.205	
В	2.04	2.71	0.080	0.107	
С	28		1.102		
D	0.712	0.863	0.028	0.034	

Cooling method : by convection and conduction Marking: clear, ring at cathode end. Weight: 0.34g

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