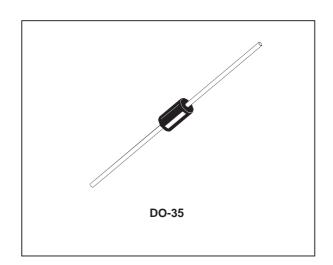


SMALL SIGNAL SCHOTTKY DIODE



DESCRIPTION

General purpose, metal to silicon diodes featuring very low turn-on voltage and fast switching. These devices have integrated protection against excessive voltage such as electrostatic discharges.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter	BAT47	BAT48	Unit	
V_{RRM}	Repetitive Peak Reverse Voltage	20	40	V	
I _F	Forward Continuous Current*	35	mA		
I _{FRM}	$\begin{array}{ c c c c c c } \hline \text{Repetitive Peak Fordward Current*} & & t_p \leq 1s \\ & & \delta \leq 0.5 \end{array}$		1		А
I _{FSM}	Surge non Repetitive Forward Current* $t_p = 10ms \qquad \qquad 7.5$ $t_p = 1s \qquad \qquad 1.5$		7.5		А
			.5		
P _{tot}	Power Dissipation* T _a = 25°C		330		mW
$T_{stg} \ T_{j}$	Storage and Junction Temperature Range	- 65 to + 150 - 65 to + 125		°C ℃	
T_L	Maximum Temperature for Soldering during Case	230		°C	

THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
$R_{th(j-l)}$	Junction-ambient*	300	°C/W

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

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ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Тур.	Max.	Unit
$V_{(BR)}$	$I_R = 10\mu A$		BAT47	20			V
	I _R = 25μA		BAT48	40			
V _F *	$T_j = 25$ °C $I_F = 0.1$ mA		All Types			0.25	V
	$T_j = 25^{\circ}C$ $I_F = 1mA$					0.3	
	$T_j = 25^{\circ}C$ $I_F = 10mA$					0.4	
	$T_j = 25^{\circ}C$ $I_F = 30mA$		BAT47			0.5	
	$T_j = 25^{\circ}C$ $I_F = 150mA$					0.8	
	$T_j = 25^{\circ}C$ $I_F = 300mA$					1	
	$T_j = 25^{\circ}C$ $I_F = 50mA$	BAT48				0.5	
	$T_j = 25^{\circ}C$ $I_F = 200mA$					0.75	
	$T_j = 25^{\circ}C$ $I_F = 500mA$					0.9	
I _R *	T _j = 25°C	V _R = 1.5V	All Types			1	μΑ
	$T_j = 60^{\circ}C$					10	
	T _j = 25°C	V _R = 10V	BAT47			4	
	$T_j = 60^{\circ}C$					20	
	T _j = 25°C	V _R = 20V				10	
	$T_j = 60^{\circ}C$					30	
	T _j = 25°C	V _R = 10V	BAT48			2	
	T _j = 60°C					15	
	T _j = 25°C	V _R = 20V				5	
	$T_j = 60^{\circ}C$					25	
	T _j = 25°C	V _R = 40V				25	
	T _j = 60°C					50	

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions			Тур.	Max.	Unit
С	$T_j = 25$ °C $V_R = 0$ V	f = 1MHz		20		pF
	$T_j = 25^{\circ}C$ $V_R = 1V$			12		

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

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Fig. 1: Forward current versus forward voltage at different temperatures (typical values).

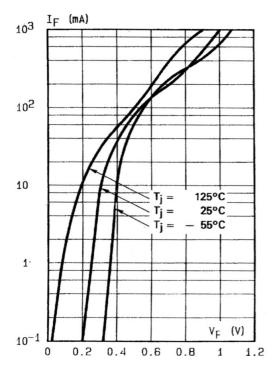


Fig. 2: Forward current versus forward voltage (typical values).

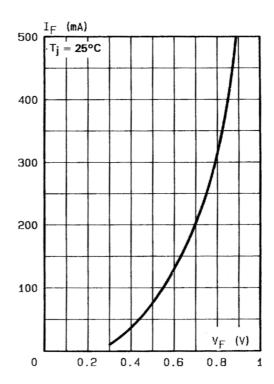


Fig. 3: Reverse current versus junction temperature.

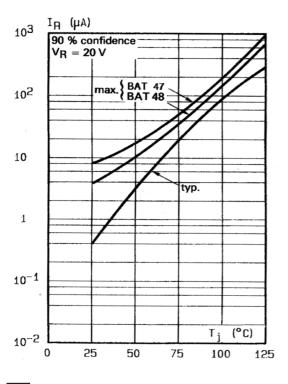
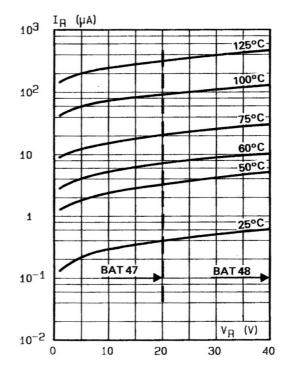
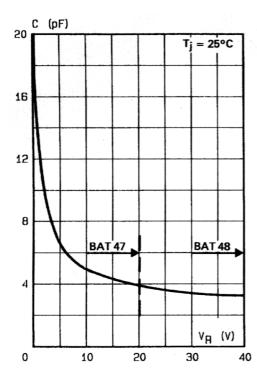


Fig. 4: Reverse current versus continuous reverse voltage (typical values).



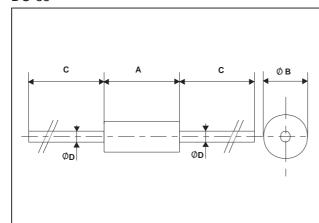
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Fig. 5: Capacitance C versus reverse applied voltage $V_{\mbox{\tiny R}}$ (typical values).



PACKAGE MECHANICAL DATA

DO-35



REF.		DIMEN	SIONS	
	Millimeters		Inc	hes
	Min.	Max.	Min.	Max.
А	3.05	4.50	0.120	0.177
В	1.53	2.00	0.060	0.079
С	28.00		1.102	
D	0.458	0.558	0.018	0.022

Cooling method: by convection and conduction.

Marking: clear, ring at cathode end.

Weight: 0.015g

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