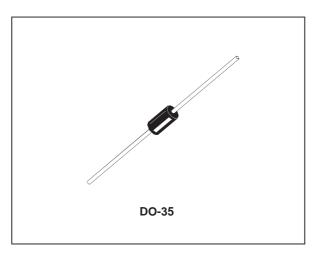


Unit V mΑ mΑ

А mW °C °C

°C

## SMALL SIGNAL SCHOTTKY DIODES



230

#### DESCRIPTION

General purpose, metal to silicon diodes featuring very low turn-on voltage fast switching.

These devices have integrated protection against excessive voltage such as electrostatic dis-

BSOLUTE RATINGS (limiting values)						
Symbol	Parameter		Value			
V <sub>RRM</sub>	Repetitive Peak Reverse Voltage		30			
١ <sub>F</sub>	Forward Continuous Current	$T_a = 25^{\circ}C$	200			
I <sub>FRM</sub>	Repetitive Peak Fordware Current	$\begin{array}{l} t_p \ \leq 1s \\ \delta \leq 0.5 \end{array}$	500			
I <sub>FSM</sub>	Surge non Repetitive Forward Current*	t <sub>p</sub> = 10ms	4			
Ptot	Power Dissipation*	T <sub>I</sub> = 65 °C	200			
T <sub>stg</sub> Tj	Storage and Junction Temperature Range		- 65 to +150 - 65 to +125			
T,	Maximum Temperature for Soldering during 10	s at 4mm from	230			

#### F RATINGS (limiti Α

#### THERMAL RESISTANCE

Case

 $\mathsf{T}_\mathsf{L}$ 

Symbol	Test Conditions	Value	Unit
R <sub>th(j-a)</sub>	Junction-ambient*	300	°C/W

\* On infinite heatsink with 4mm lead length

#### **ELECTRICAL CHARACTERISTICS**

### STATIC CHARACTERISTICS

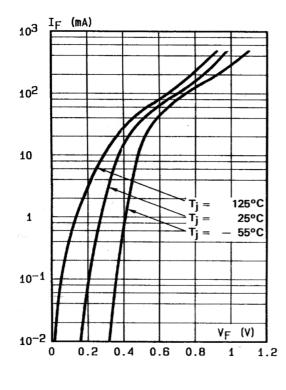
Symbol	Test Conditions			Min.	Тур.	Max.	Unit
V <sub>BR</sub>	Tj = 25°C	$I_R = 100 \mu A$		30			V
V <sub>F</sub> *	T <sub>j</sub> = 25°C	$I_F = 200 \text{mA}$	All Types			1	V
	$T_j = 25^{\circ}C$	$I_F = 10 \text{mA}$	BAT 42			0.4	
	T <sub>j</sub> = 25°C	$I_F = 50 \text{mA}$				0.65	
	T <sub>j</sub> = 25°C	$I_F = 2mA$	BAT 43	0.26		0.33	
	T <sub>j</sub> = 25°C	I <sub>F</sub> = 15mA				0.45	
I <sub>R</sub> *	T <sub>j</sub> = 25°C		V <sub>R</sub> = 25V			0.5	μA
	T <sub>j</sub> = 100°ÉC					100	

#### **DYNAMIC CHARACTERISTICS**

Symbol	Test Conditions		Тур.	Max.	Unit
С	$T_j = 25^{\circ}C$ $V_R = 1V$ $f = 1MHz$		7		pF
trr	$ \begin{array}{l} Tj=25^{\circ}C \hspace{.1in} I_{F}=10mA \hspace{.1in} I_{R}=10mA \hspace{.1in} i_{rr}=1mA \\ R_{L}=100\Omega \end{array} $			5	ns
h	$T_j = 25^{\circ}C  R_L = 15K\Omega  C_L = 300pF  f = 45MHz  V_i = 2V$	80			%

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

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



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

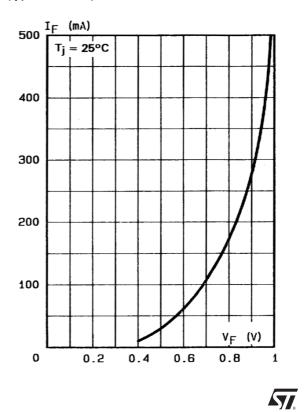


Fig. 3: Reverse current versus junction temperature (typical values).

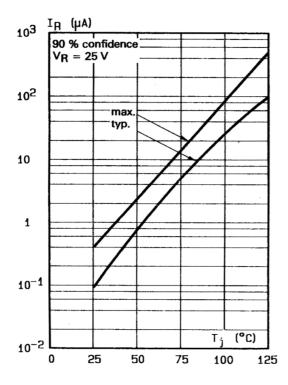


Fig. 5: Capacitance C versus reverse applied voltage  $V_{R}$  (typical values).

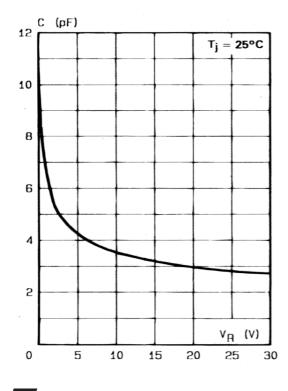
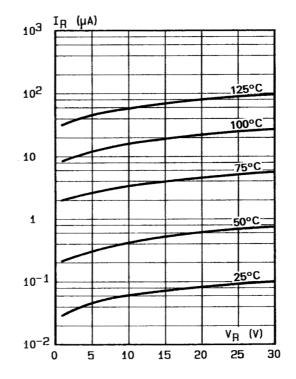
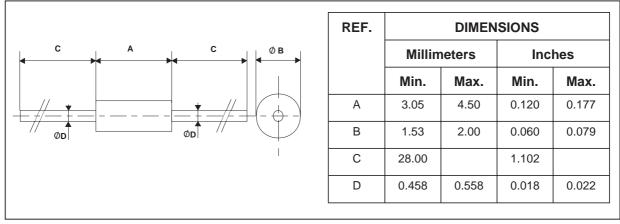


Fig. 4: Reverse current versus continuous reverse voltage.



#### PACKAGE MECHANICAL DATA





Cooling method: by convection and conduction Marking: clear, ring at cathode end. Weight: 0.15g

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