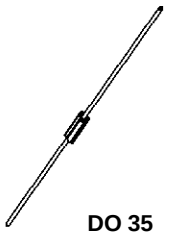
SGS-THOMSON MICROELECTRONICS

1N 5712

SMALL SIGNAL SCHOTTKY DIODE



DO 35
(Glass)

DESCRIPTION

Metal to silicon junction diode featuring high break-down voltage, low turn-on voltage and ultrafast switching.

Primarily intended for high level UHF/VHF detection and pulse application with broad dynamic range.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		20	V
I_F	Forward Continuous Current*	T_a = 25 °C	35	mA
P_{tot}	Power Dissipation*	T_a = 25°C	430	mW
T_{stg} T_j	Storage and Junction Temperature Range		- 65 to 200	°C
T_L	Maximum Lead Temperature for Soldering during 10s at 4mm from Case		230	°C

THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
$R_{th(j-a)}$	Junction-ambient*	400	°C/W

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
V_{BR}	T_{amb} = 25°C	I_R = 10µA	20			V
V_F * *	T_{amb} = 25°C	I_F = 1mA			0.41	V
	T_{amb} = 25°C	I_F = 35mA			1	
I_R * *	T_{amb} = 25°C	V_R = 15V			0.1	µA

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
C	T_{amb} = 25°C	V_R = 0V	f = 1MHz			1.2	pF
τ	T_{amb} = 25°C	I_F = 5mA	Krakauer Method			100	ps

* On infinite heatsink with 4mm lead length
** Pulse test: $t_p \leq 300\mu s$ $\delta < 2\%$.
Matched batches available on request. Test conditions (forward voltage and/or capacitance) according to customer specification.

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

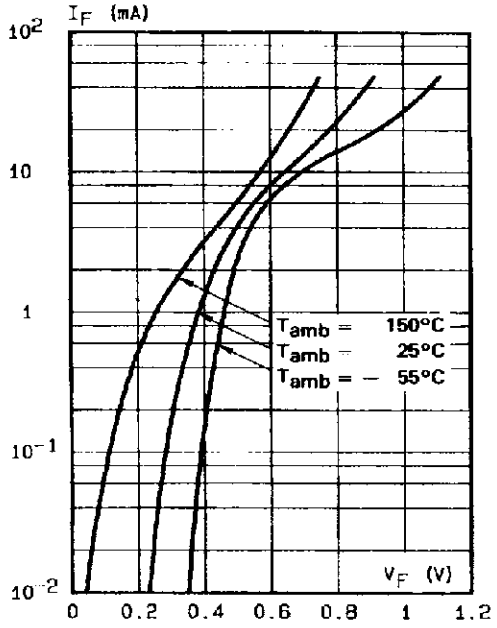


Figure 2. Forward current versus forward voltage (typical values).

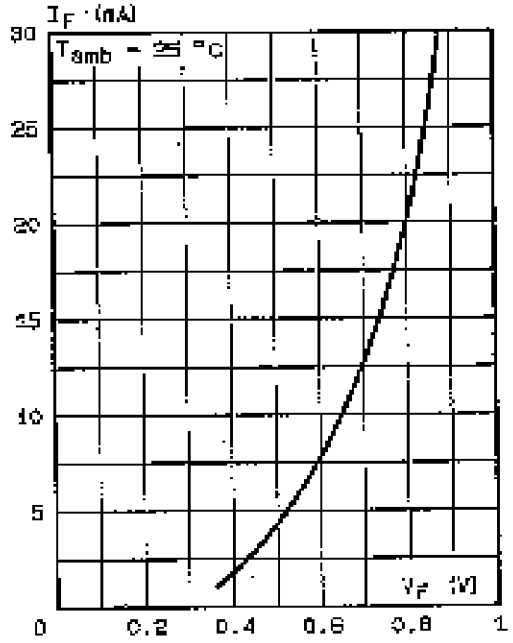


Figure 3. Reverse current versus ambient temperature.

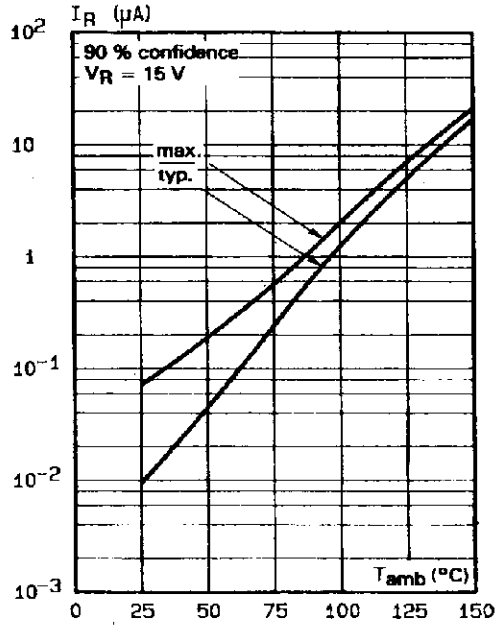


Figure 4. Reverse current versus continuous reverse voltage (typical values).

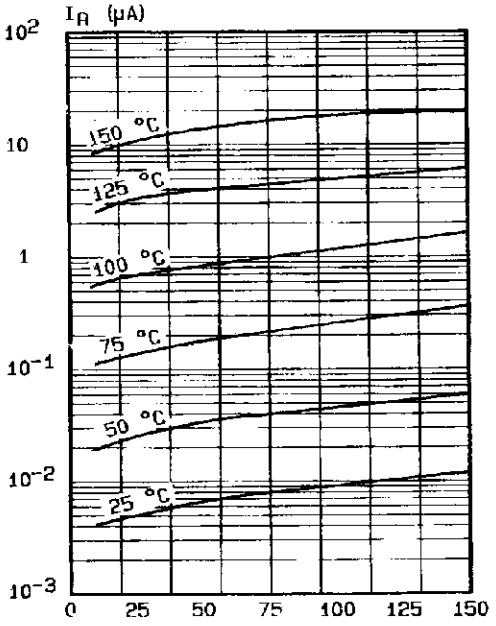
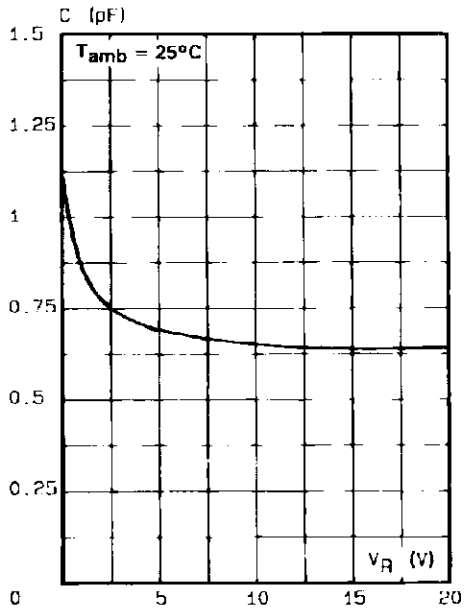
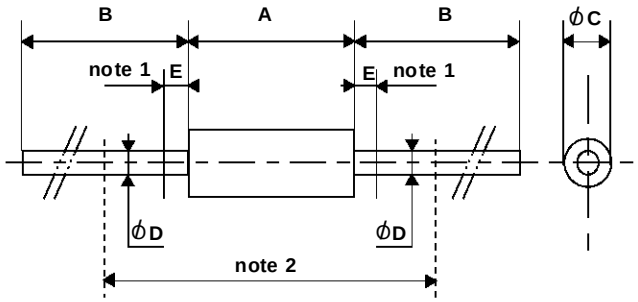


Figure 5. Capacitance C versus reverse applied voltage V_R (typical values).



PACKAGE MECHANICAL DATA

DO 35 Glass



REF.	DIMENSIONS				NOTES
	Millimeters		Inches		
	Min.	Max.	Min.	Max.	
A	3.050	4.500	0.120	0.117	1 - The lead diameter ∅ D is not controlled over zone E 2 - The minimum axial lengh within which the device may be placed with its leads bent at right angles is 0.59”(15 mm)
B	12.7		0.500		
∅ C	1.530	2.000	0.060	0.079	
∅ D	0.458	0.558	0.018	0.022	
E		1.27		0.050	

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