

Small Signal Product

### 500mW High Speed Switching Diode

FEATURES

- Fast switching device ( $t_{rr} < 4.0ns$ )
- Through-hole device type mounting
- Moisture sensitivity level 1
- Solder hot dip Tin(Sn) lead finish
- Pb free version and RoHS compliant
- All external surfaces are corrosion resistant and leads are readily solderable
- Packing code with suffix "G" means Halogen-free



**DO-35**  
Hermetically Sealed Glass

MECHANICAL DATA

- Case : DO-35
- High temperature soldering guaranteed: 260°C/10s
- Polarity: Indicated by black cathode band
- Weight : 109 ± 4 mg

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power Dissipation	P <sub>D</sub>	500	mW
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	V
Peak Forward Surge Current Pluse Width = 1μs, Square Wave	I <sub>FSM</sub>	2.0	A
Non-Repetitive Peak Forward Current	I <sub>FM</sub>	450	mA
Average Forward Current	I <sub>O</sub>	150	mA
Thermal Resistance (Junction to Ambient)	R <sub>θJA</sub>	240	°C/W
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

PARAMETER	SYMBOL	MIN	TYP	MAX	CONDITION	UNIT
Reverse Breakdown Voltage	V <sub>(BR)</sub>	100	-	-	I <sub>R</sub> =100μA	V
		75	-	-	I <sub>R</sub> =5μA	
Forward Voltage	V <sub>F</sub>	0.62	-	0.72	1N4448, 1N914B I <sub>F</sub> =5.0mA	V
		-	-	1.0	1N4148 I <sub>F</sub> =10.0mA	
		-	-	1.0	1N4448, 1N914B I <sub>F</sub> =100.0mA	
Reverse Leakage Current	I <sub>R</sub>	-	-	25	V <sub>R</sub> =20V	nA
		-	-	5.0	V <sub>R</sub> =75V	μA
Junction Capacitance	C <sub>J</sub>	-	-	4.0	V <sub>R</sub> =0, f=1.0MHz	pF
Reverse Recovery Time (Note 1)	T <sub>rr</sub>	-	-	4.0		ns

Note : 1. Test Conditions : I<sub>F</sub>=10mA, V<sub>R</sub>=6V, R<sub>L</sub>=100Ω, I<sub>RR</sub>=1mA

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**ORDERING INFORMATION**

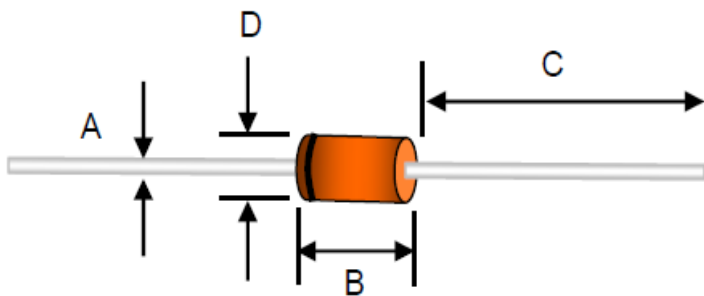
PART NO.	PART NO. SUFFIX (Note 2)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
1Nxxxx (Note1)	-xx	R0 A0	G	DO-35	10K / 14" Reel 5K / Box ( Ammo)

Note 1: "xxxx" is device code from 1N4148 to 1N914B  
 Note 2: Part No. Suffix „-xx “ would be used for special requirement

**EXAMPLE**

PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
1N4148 R0G	1N4148		R0	G	Multiple manufacture source Halogen free
1N4148-L0 R0G	1N4148	L0	R0	G	Define manufacture source Halogen free
1N4148-B0 R0G	1N4148	B0	R0	G	Define manufacture source Halogen free

PACKAGE OUTLINE DIMENSION



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.34	0.60	0.013	0.024
B	2.90	5.08	0.114	0.200
C	25.40	38.10	1.000	1.500
D	1.30	2.28	0.051	0.090

MARKING DIAGRAM



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RATINGS AND CHARACTERISTICS CURVES

( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig.1 Typical Forward Characteristics

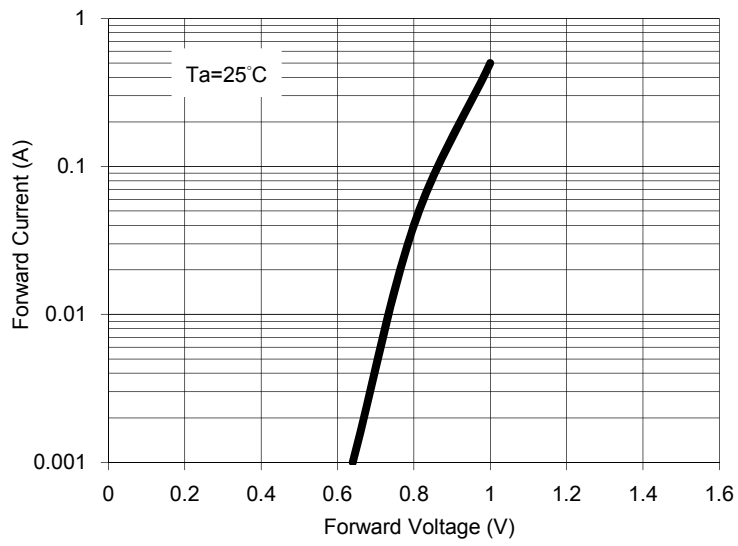


Fig. 2 Reverse Current VS. Reverse Voltage

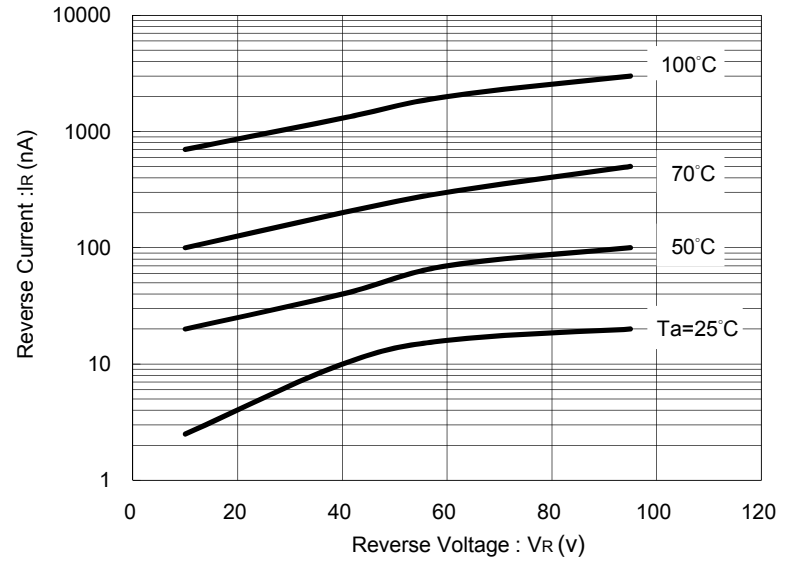


Fig. 3 Admissible Power Dissipation Curve

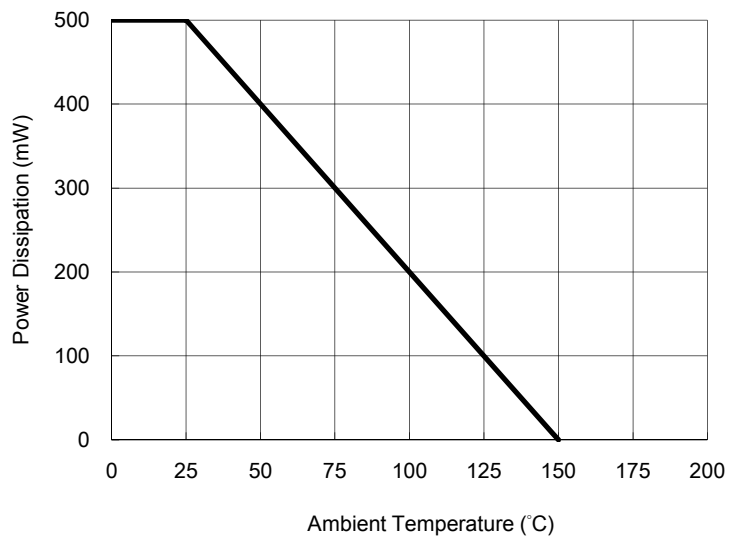
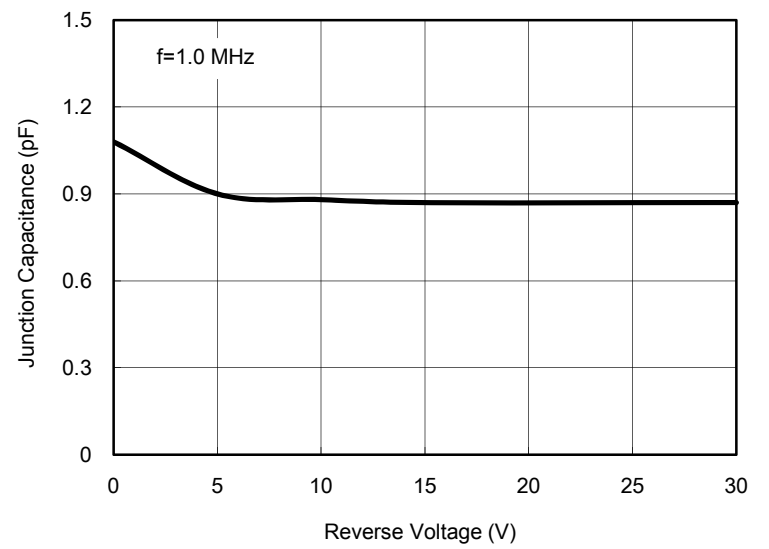


Fig. 4 Typical Junction Capacitance



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