

150mA, 100V Switching Diode

FEATURES

- Fast switching device ($t_{rr} < 4\text{ns}$)
- High surge current capability
- Hermetically sealed glass
- RoHS Compliant

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- On-board DC/DC converter

MECHANICAL DATA

- Case: DO-35
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 101.67mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	150	mA
V_{RRM}	100	V
I_{FSM}	2	A
V_F at $I_F = 100\text{mA}$	1	V
$T_{J\text{MAX}}$	150	°C
Package	DO-35	
Configuration	Single die	



DO-35



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	1N4148	1N4448	1N914B	UNIT
Marking code on the device		1N4148	1N4448	1N914B	
Power dissipation	P_D	500			mW
Repetitive peak reverse voltage	V_{RRM}	100			V
Forward current	I_F	150			mA
Non-repetitive square wave peak forward surge current, $t = 1\mu\text{s}$	I_{FSM}	2			A
Repetitive peak forward current	I_{FRM}	450			mA
Junction temperature range	T_J	-65 to +150			°C
Storage temperature range	T_{STG}	-65 to +150			°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	240	°C/W

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)						
PARAMETER		CONDITIONS	SYMBOL	MIN	MAX	UNIT
Forward voltage ⁽¹⁾	1N4448 1N914B	$I_F = 5\text{mA}, T_J = 25^\circ\text{C}$	V_F	0.62	0.72	V
	1N4148	$I_F = 10\text{mA}, T_J = 25^\circ\text{C}$		-	1	V
	1N4448 1N914B	$I_F = 100\text{mA}, T_J = 25^\circ\text{C}$		-	1	V
Reverse voltage ⁽²⁾		$I_R = 100\mu\text{A}, T_J = 25^\circ\text{C}$	V_R	100	-	V
		$I_R = 5\mu\text{A}, T_J = 25^\circ\text{C}$		75	-	V
Reverse current ⁽²⁾		$V_R = 20\text{V}, T_J = 25^\circ\text{C}$	I_R	-	25	nA
		$V_R = 75\text{V}, T_J = 25^\circ\text{C}$		-	5	μA
Junction capacitance		1MHz, $V_R = 0\text{V}$	C_J	-	4	pF
Reverse recovery time		$I_F = 10\text{mA}, V_R = 6\text{V}$ $R_L = 100\Omega, I_{RR} = 1\text{mA}$	t_{rr}	-	4	ns

Notes:

1. Pulse test with $PW = 0.3\text{ms}$
2. Pulse test with $PW = 30\text{ms}$

ORDERING INFORMATION		
ORDERING CODE⁽¹⁾	PACKAGE	PACKING
1N4148 R0	DO-35	10,000 / 14" Reel
1N4148 A0	DO-35	5,000 / Ammo Box
1N4448 R0	DO-35	10,000 / 14" Reel
1N4448 A0	DO-35	5,000 / Ammo Box
1N914B R0	DO-35	10,000 / 14" Reel
1N914B A0	DO-35	5,000 / Ammo Box
1N4148 R0G	DO-35	10,000 / 14" Reel
1N4148 A0G	DO-35	5,000 / Ammo Box
1N4448 R0G	DO-35	10,000 / 14" Reel
1N4448 A0G	DO-35	5,000 / Ammo Box
1N914B R0G	DO-35	10,000 / 14" Reel
1N914B A0G	DO-35	5,000 / Ammo Box

Notes:

1. Above ordering codes A0/A0G/R0/R0G refer to physically identical parts without any differences

CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

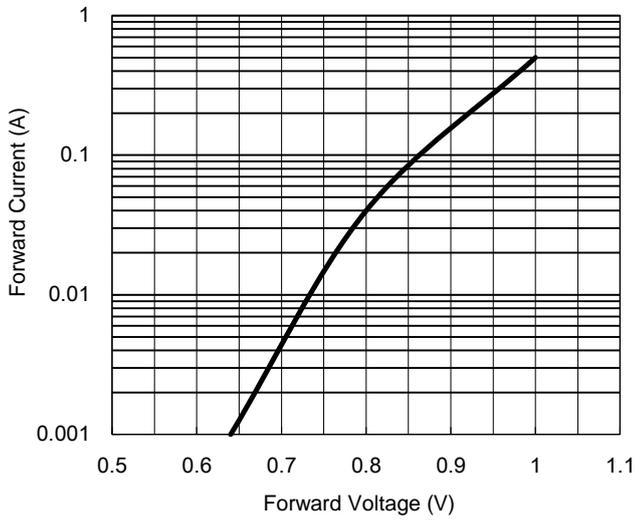


Fig.2 Reverse Current VS. Reverse Voltage

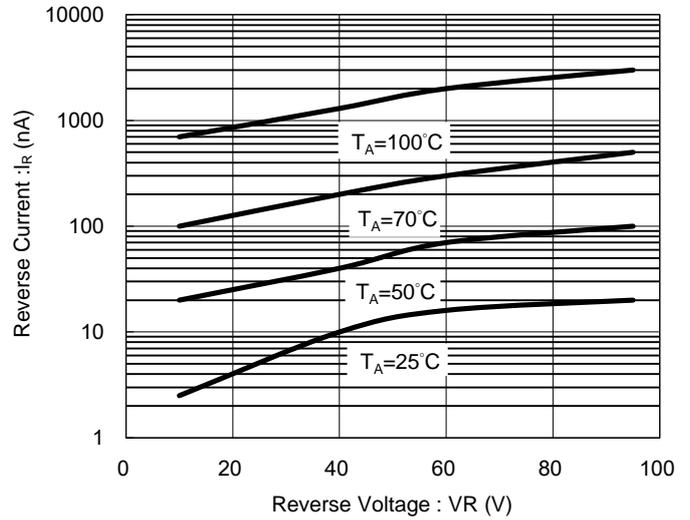


Fig.3 Admissible Power Dissipation Curve

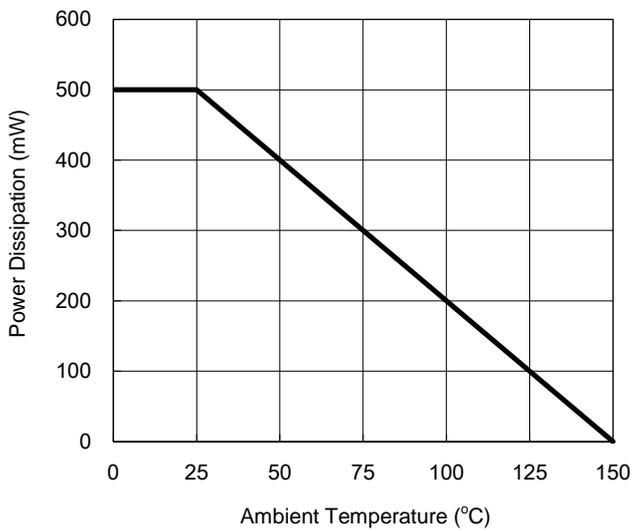
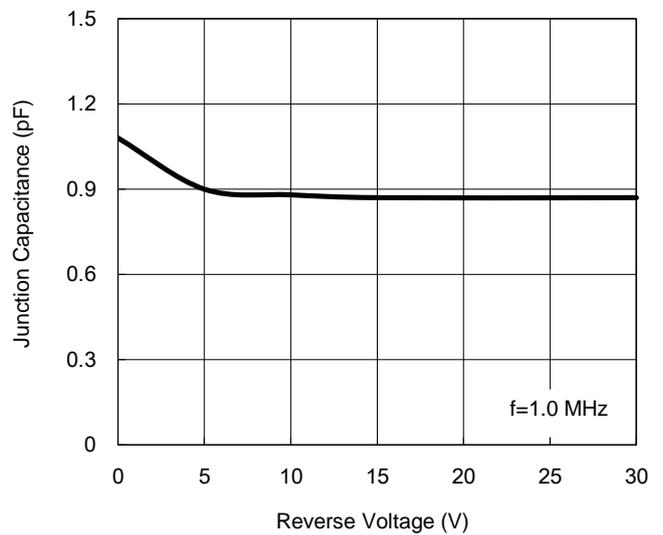
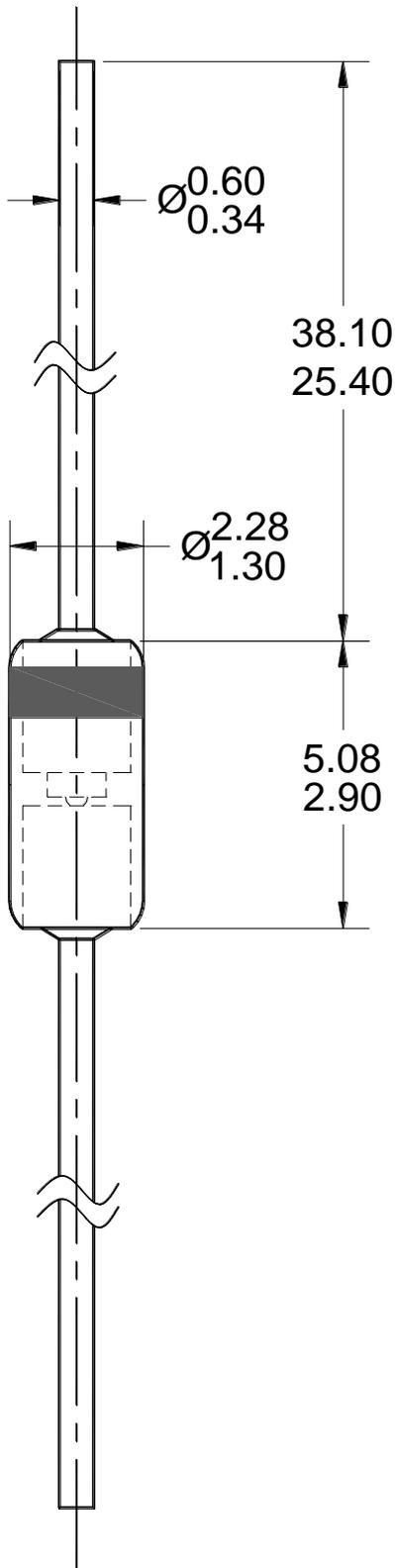


Fig.4 Typical Junction Capacitance



PACKAGE OUTLINE DIMENSIONS

DO-35



NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. DWG NO. REF: HQ2SD07-DO35-058 REV A.



XX = MARKING CODE

MARKING DIAGRAM

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