International
IOR Rectifier

PD-94232D

SCHOTTKY RECTIFIER
HIGH EFFICIENCY SERIES

35GQ100
JANS1N7069T1
JANTX1N7069T1
JANTXV1N7069T1

35Amp, 100V
Ref: MIL-PRF-19500/761

Major Ratings and Characteristics

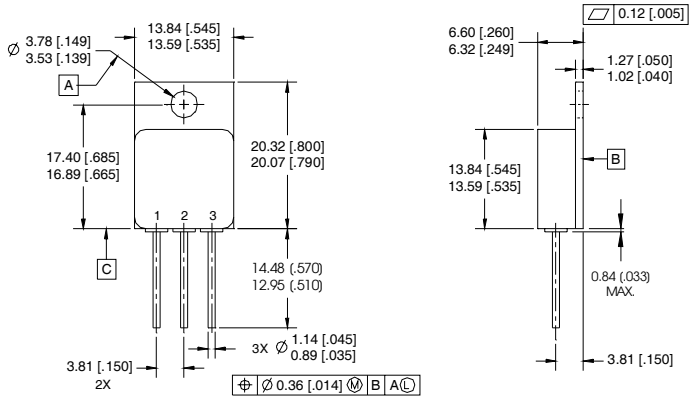
Characteristics	1N7069T1	Units
$I_{F(AV)}$	35	A
V_{RRM}	100	V
I_{FSM} @ tp = 8.3ms half-sine	270	A
V_F @ 35Apk, T_J =125°C	1.0	V
T_J,T_{stg} Operating and storage	-65 to 150	°C

Description/Features

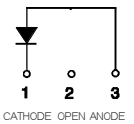
The 1N7069T1 Schottky rectifier has been expressly designed to meet the rigorous requirements of high reliability environments. It is packaged in the hermetic isolated TO-254AApackage. The device's forward voltage drop and reverse leakage current are optimized for the lowest power loss and the highest circuit efficiency for typical high frequency switching power supplies and resonent power converters. Full MIL-PRF-19500 quality conformance testing is available on source control drawings to TX, TXV and S quality levels.

- Hermetically Sealed
- Low Forward Voltage Drop
- High Frequency Operation
- Guard Ring for Enhanced Ruggedness and Long term Reliability
- Lightweight
- ESD Rating: Class NS per MIL-STD-750, Method 1020

CASE STYLE



NOTES:
1. DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994.
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS (INCHES).
3. CONTROLLING DIMENSION: INCH.
4. CONFORMS TO JEDEC OUTLINE TO-254AA.



Case Outline and Dimensions - TO-254AA

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Voltage Ratings

	Part number	1N7069T1
V_R	Max. DC Reverse Voltage (V)	100
V_{RWM}	Max. Working Peak Reverse Voltage (V)	

Absolute Maximum Ratings

	Parameters	Limits	Units	Conditions
$I_{F(AV)}$	Max. Average Forward Current See Fig. 5	35	A	50% duty cycle @ T_C = 81°C, square waveform
I_{FSM}	Max. Peak One Cycle Non - Repetitive Surge Current	270	A	@ t_p = 8.3 ms half-sine

Electrical Specifications

	Parameters	Limits	Units	Conditions	
V_{FM}	Max. Forward Voltage Drop See Fig. 1①	1.0	V	@ 35A	T_J = -55°C
		1.42	V	@ 70A	
		1.05	V	@ 35A	T_J = 25°C
		1.52	V	@ 70A	
		1.0	V	@ 35A	T_J = 125°C
		1.47	V	@ 70A	
I_{RM}	Max. Reverse Leakage Current See Fig. 2①	0.036	mA	T_J = 25°C	V_R = rated V_R
		7.5	mA	T_J = 100°C	
		28	mA	T_J = 125°C	
C_T	Max. Junction Capacitance	1375	pF	V_R = 5V_{DC} (1MHz, 25°C)	
L_S	Typical Series Inductance	7.8	nH	Measured from anode lead to cathode lead 6mm (0.025 in.) from package	

Thermal-Mechanical Specifications

	Parameters	Limits	Units	Conditions
T_J	Max.Junction Temperature Range	-65 to 150	°C	
T_{stg}	Max. Storage Temperature Range	-65 to 150	°C	
R_{thJC}	Max. Thermal Resistance, Junction to Case	1.1	°C/W	DC operation See Fig. 4
wt	Weight (Typical)	9.3	g	
	Die Size (Typical)	200X200	mils	
	Case Style	TO-254AA		

① Pulse Width < 300µs, Duty Cycle < 2%

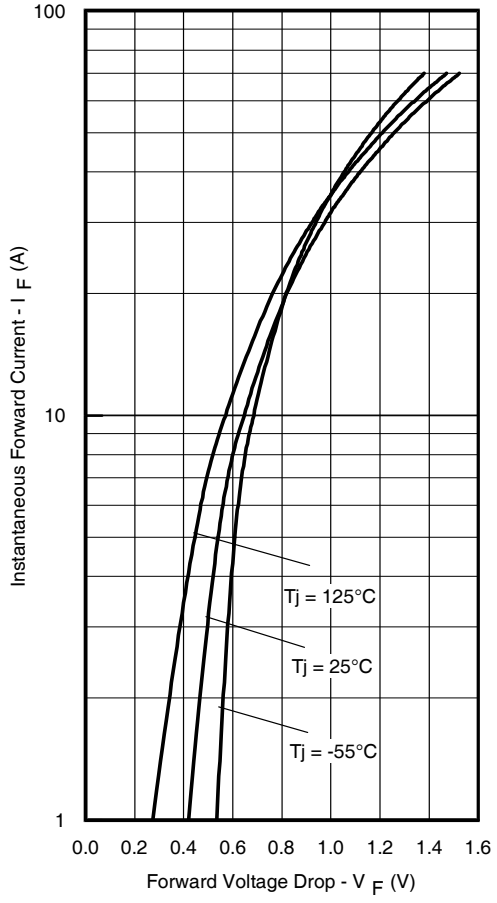

Fig. 1 - Max. Forward Voltage Drop Characteristics

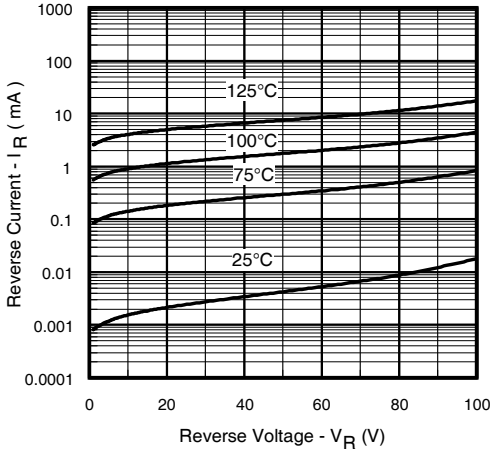

Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

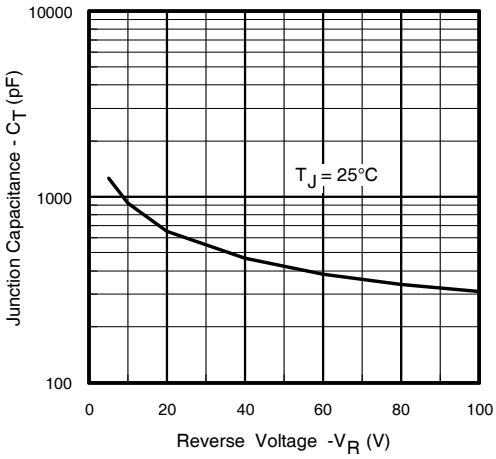

Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

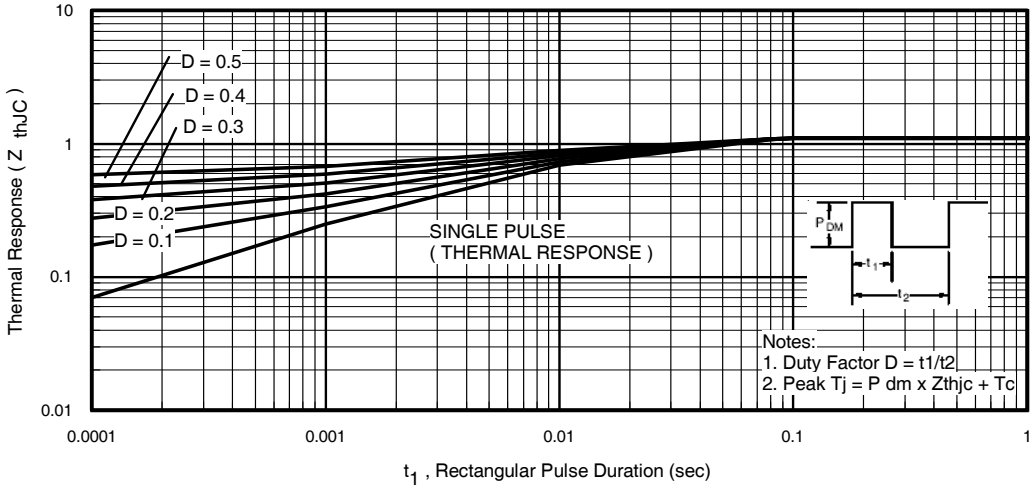

Fig. 4 - Max. Thermal Impedance Z_{thJC} Characteristics

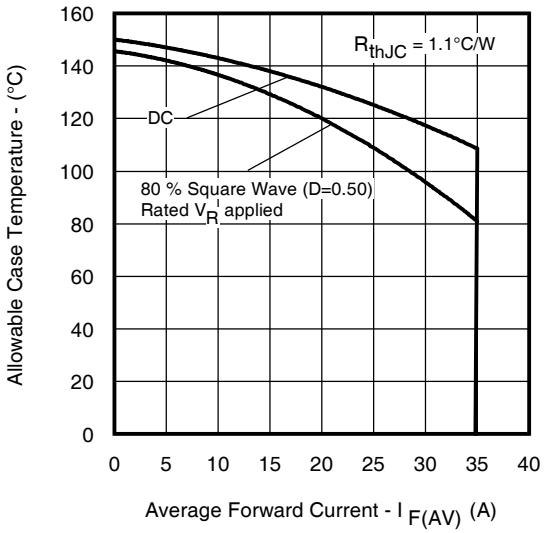

Fig. 5 - Max. Allowable Case Temperature Vs.
Average Forward Current

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