

SCHOTTKY RECTIFIER
HIGH EFFICIENCY SERIES

35GQ100
JANS1N7069T1
JANTX1N7069T1
JANTXV1N7069T1

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

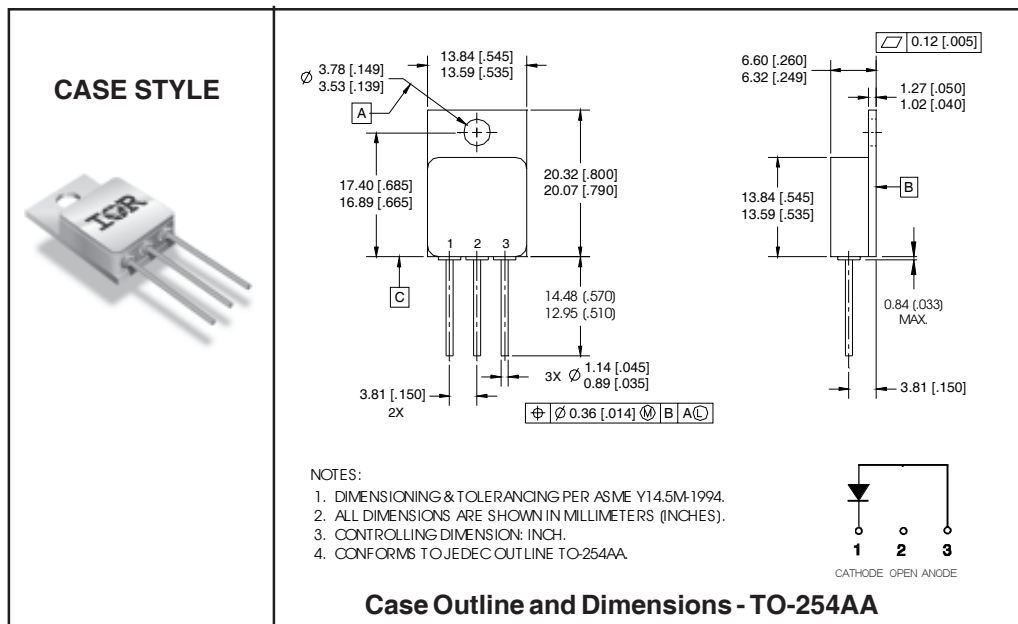
Major Ratings and Characteristics

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

Description/Features

The 1N7069T1 Schottky rectifier has been expressly designed to meet the rigorous requirements of HiRel environments. It is packaged in the hermetic isolated TO-254AA package. 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 resonant 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



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
	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%

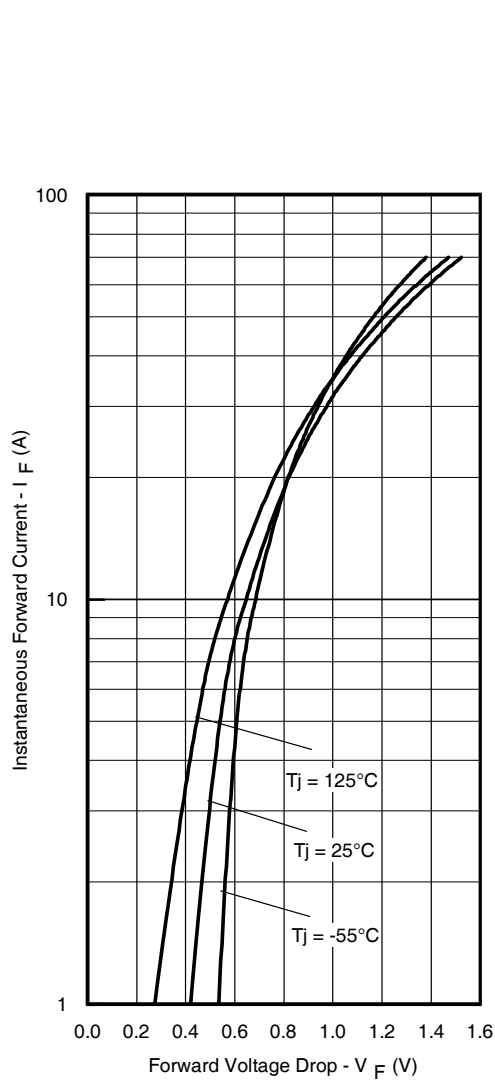


Fig. 1 - Max. Forward Voltage Drop Characteristics

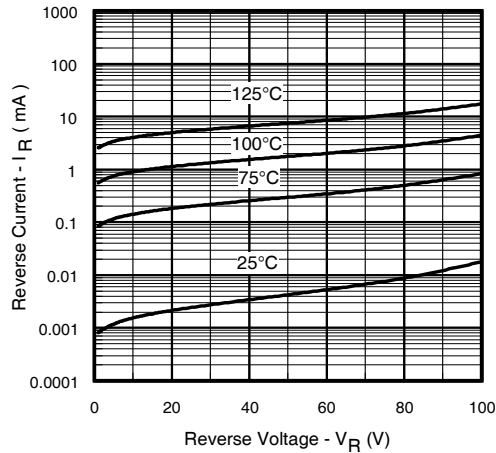


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

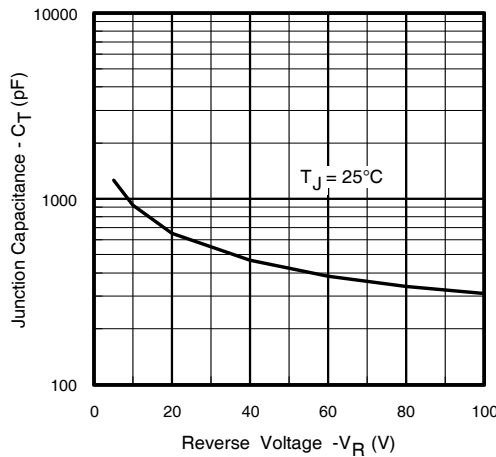
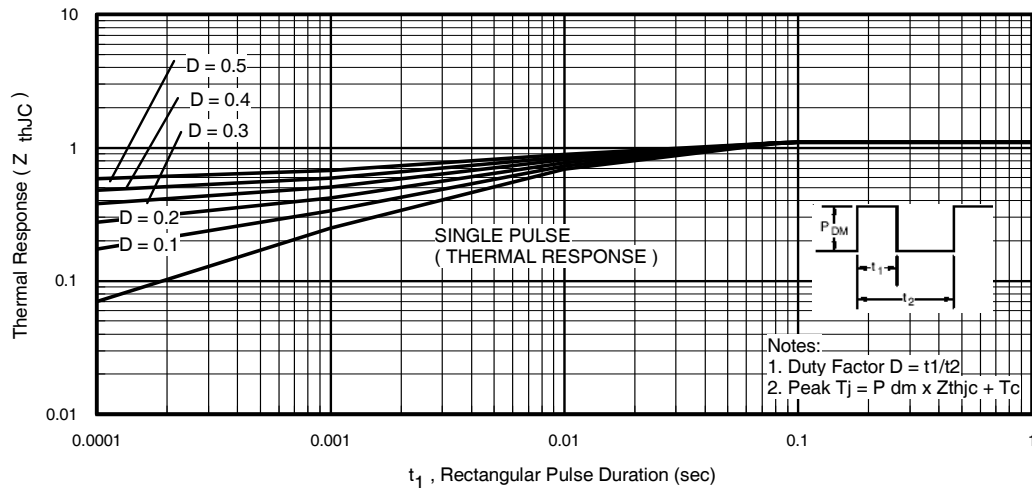
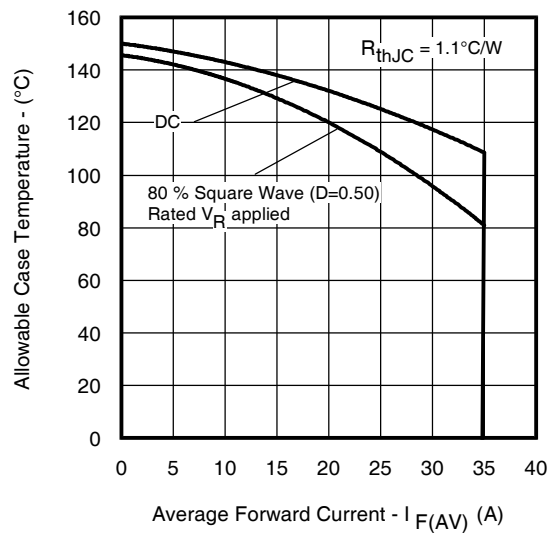


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

Fig. 4 - Max. Thermal Impedance Z_{thJC} CharacteristicsFig. 5 - Max. Allowable Case Temperature Vs.
Average Forward Current