

International IRF Rectifier

22GQ100

SCHOTTKY RECTIFIER

30 Amp

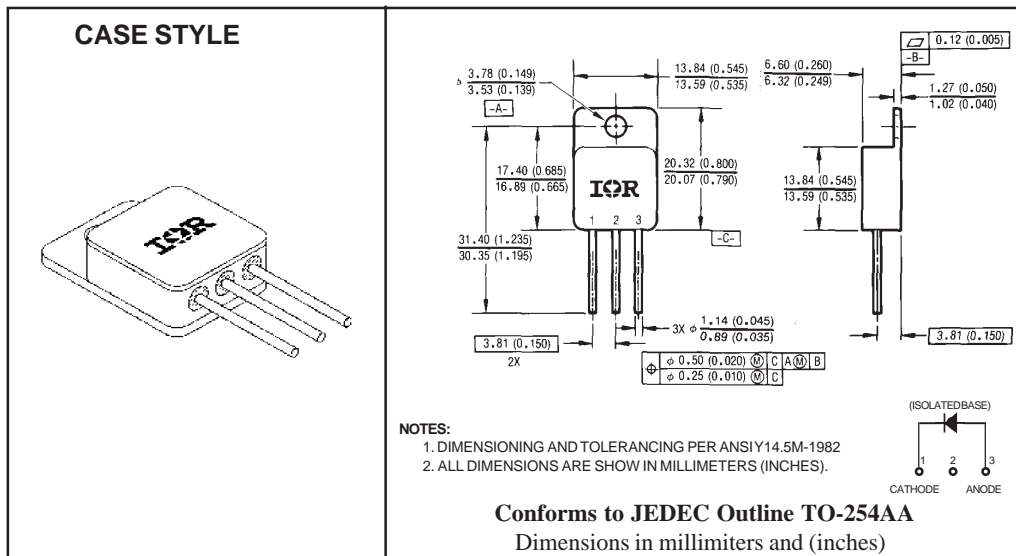
Major Ratings and Characteristics

Characteristics	22GQ100	Units
$I_{F(AV)}$ Rectangular waveform	30	A
V_{RRM}	100	V
I_{FSM} @ $t_p = 8.3ms$ sine	400	A
V_F @ 30Apk, $T_J = 125^\circ C$	0.90	V
T_J, T_{stg} Operating and storage	-55 to 150	$^\circ C$

Description/Features

The 22GQ100 Schottky rectifier has been expressly designed to meet the rigorous requirements of hi-rel environments. It is packaged in the hermetic, isolated, TO-254AA package and has extremely low reverse leakage at high temperature. Full MIL-PRF-19500 quality conformance testing is available on source controlled drawings to JANTX, JANTXV, or JANS levels. Typical applications include switching power supplies and resonant power converters.

- Hermetically sealed
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Electrically isolated
- Ceramic eyelets



Voltage Ratings

Part number	22GQ100
V _R Max. DC Reverse Voltage (V)	100
V _{RWM} Max. Working Peak Reverse Voltage (V)	

Absolute Maximum Ratings

Parameters	22GQ100	Units	Conditions
I _{F(AV)} Max. Average Forward Current See Fig. 4	30	A	50% duty cycle @ T _C = 100°C, rectangular waveform
I _{FSM} Max. Peak One Cycle Non - Repetitive Surge Current	400	A	@ t _p = 8.3 ms sine

Electrical Specifications

Parameters	22GQ100	Units	Conditions
V _{FM} Max. Forward Voltage Drop See Fig. 1 ①	1.10	V	@ 30A
	1.60	V	@ 60A
	0.90	V	@ 30A
	1.30	V	@ 60A
I _{RM} Max. Reverse Leakage Current See Fig. 2 ①	0.8	mA	T _J = 25°C
	45	mA	T _J = 125°C
C _T Max. Junction Capacitance	1400	pF	V _R = rated V _R
L _S Typical Series Inductance	8.7	nH	V _R = 5V _{DC} , (test signal range 100KHz to 1MHz) 25°C

Thermal-Mechanical Specifications

Parameters	22GQ100	Units	Conditions
T _J Max. Junction Temperature Range	-55 to 150	°C	
T _{stg} Max. Storage Temperature Range	-55 to 150	°C	
R _{thJC} Max. Thermal Resistance, Junction to Case	1.00	°C/W	DC operation See Fig. 5
R _{thCS} Typical Thermal Resistance, Case to Heatsink	0.21	°C/W	Mounting surface, smooth and greased
wt Weight (Typical)	9.3	g	
Die Description (Square)	0.200	inches	
Case Style	TO-254AA	JEDEC	

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

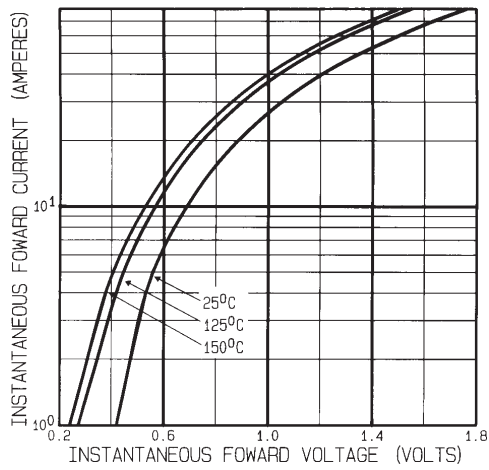


Fig. 1 - Max. Forward Voltage Drop Characteristics

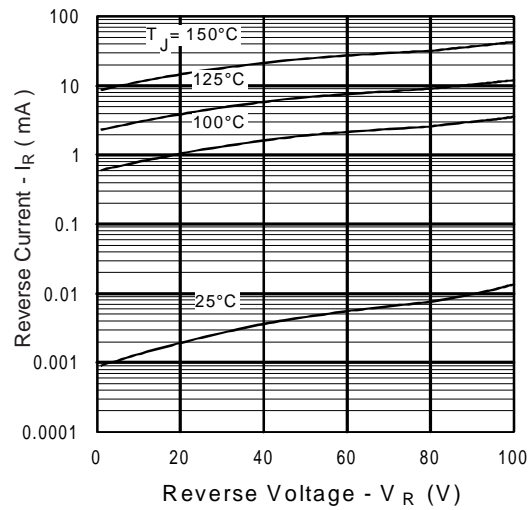


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

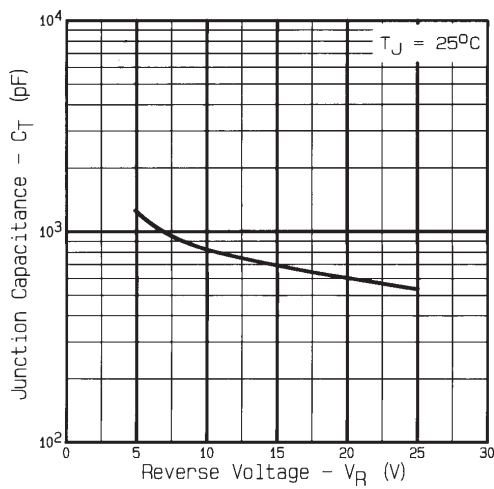


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

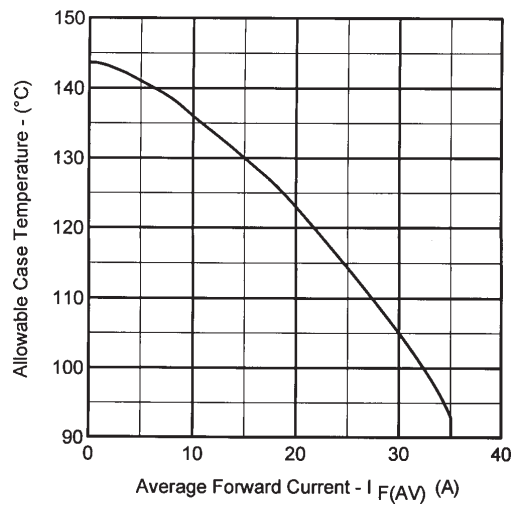


Fig. 4 - Max. Allowable Case Temperature Vs. Average Forward Current

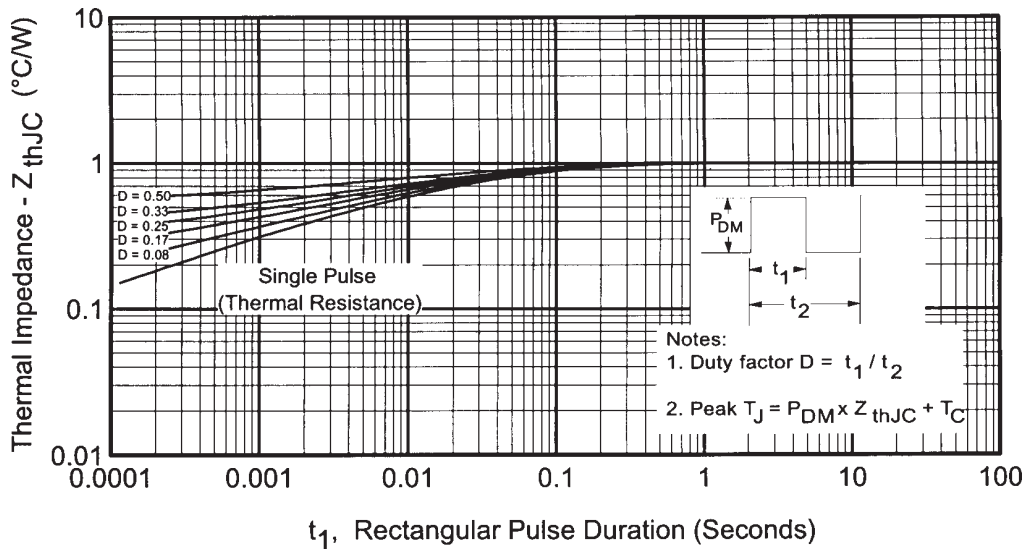


Fig.5 - Max. Thermal Impedance Z_{thJC} characteristics