

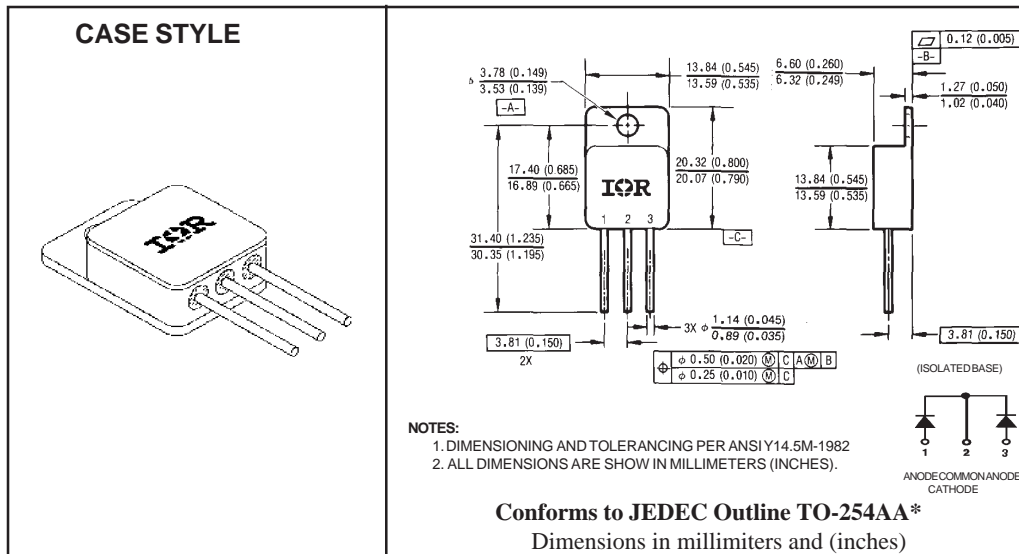
Major Ratings and Characteristics

Characteristics	15CGQ100	Units
$I_{F(AV)}$ Rectangular waveform	35	A
V_{RRM}	100	V
I_{FSM} @ $t_p = 8.3ms$ sine	250	A
V_F @ 15Apk, $T_J = 125^\circ C$ (Per Leg)	0.76	V
T_J, T_{stg} Operating and storage	-55 to 150	$^\circ C$

Description/Features

The 15CGQ100 center tap 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
- Center tap
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Electrically isolated
- Ceramic eyelets



Voltage Ratings

Part number	15CGQ100
V _R Max. DC Reverse Voltage (V) (Per Leg)	100
V _{RWM} Max. Working Peak Reverse Voltage (V) (Per Leg)	

Absolute Maximum Ratings

Parameters	15CGQ100	Units	Conditions
I _{F(AV)} Max. Average Forward Current See Fig. 4	35	A	50% duty cycle @ T _C = 100°C, rectangular waveform
I _{FSM} Max. Peak One Cycle Non - Repetitive Surge Current (Per Leg)	250	A	@ t _p = 8.3 ms sine

Electrical Specifications

Parameters	15CGQ100	Units	Conditions
V _{FM} Max. Forward Voltage Drop (Per Leg) *See Fig. 1 ①	0.95	V	@ 15A T _J = 25°C
	1.30	V	@ 35A T _J = 25°C
	0.76	V	@ 15A T _J = 125°C
	1.13	V	@ 35A T _J = 125°C
I _{RM} Max. Reverse Leakage Current (Per Leg) *See Fig. 2 ①	0.50	mA	T _J = 25°C V _R = rated V _R
	15	mA	T _J = 125°C V _R = rated V _R
C _T Max. Junction Capacitance (Per Leg)	600	pF	V _R = 5V _{DC} , (test signal range 100KHz to 1MHz) 25°C
L _S Typical Series Inductance (Per Leg)	8.7	nH	Measured lead to lead 5mm from package body

Thermal-Mechanical Specifications

Parameters	15CGQ100	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 (Per Leg)	1.67	°C/W	DC operation *See Fig. 5
R _{thJC} Max. Thermal Resistance, Junction to Case (Per Package)	0.83	°C/W	DC operation
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)	0.125	inches	
Case Style	TO-254AA		JEDEC

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

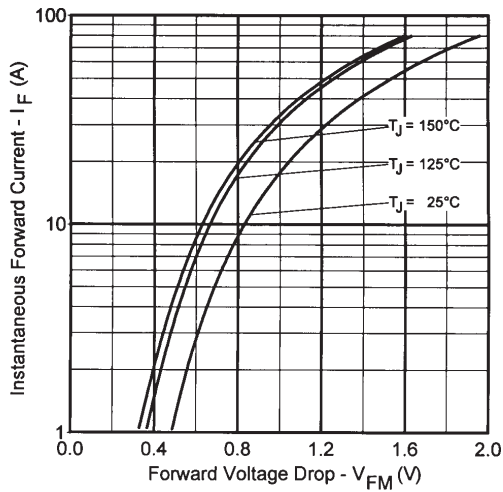


Fig. 1 - Max. Forward Voltage Drop Characteristics (Per Leg)

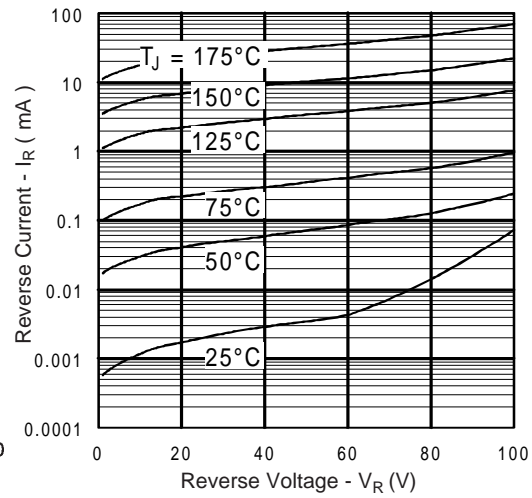


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage (Per Leg)

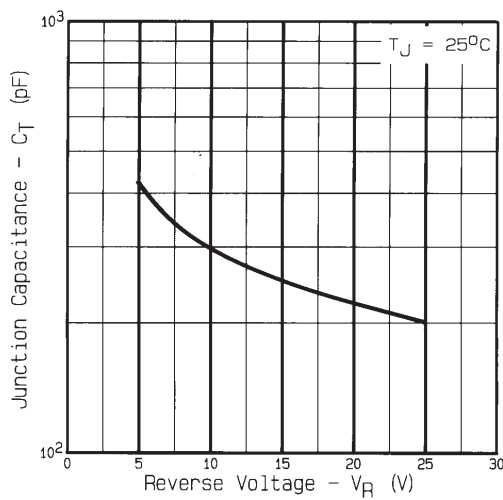


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

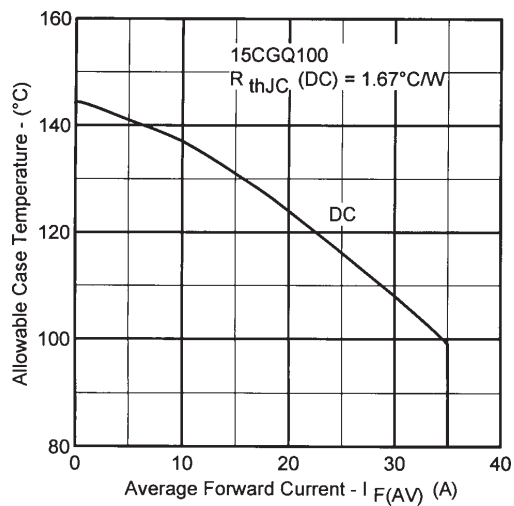


Fig. 4 - Max. Allowable Case Temperature Vs. Average Forward Current (Per Leg)

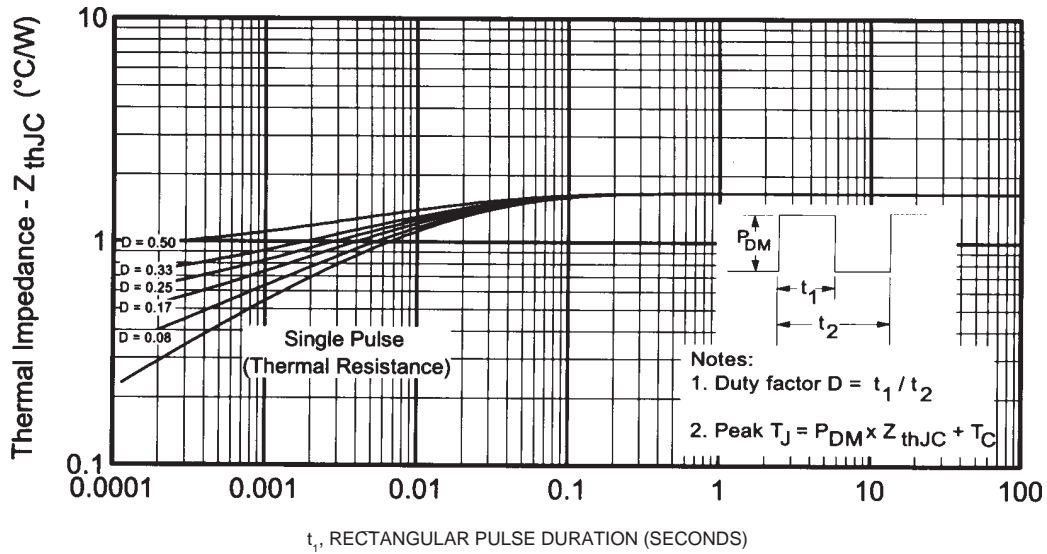


Fig.5 - Max. Thermal Impedance Z_{thJC} characteristics (Per Leg)