35SGQ060

SCHOTTKY RECTIFIER
HIGH EFFICIENCY SERIES

35 Amp. 60V

Major Ratings and Characteristics

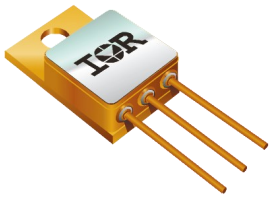
Characteristics	35SGQ060	Units
$I_{F(AV)}$	35	A
V_{RRM}	60	V
I_{FSM} @ tp = 8.3ms half–sine	400	A
V_F @ I_F = 35Apk, T_J = 125°C	0.92	V
T_J, T_{STG} Operating and storage	-55 to 150	°C

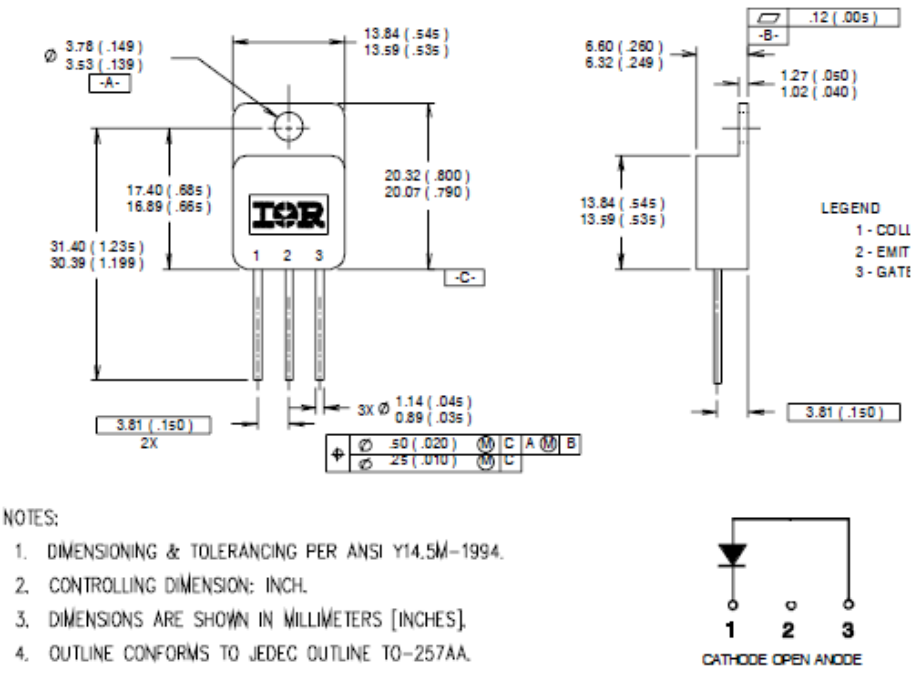
Description/Features

The 35SGQ060 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 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

CASE STYLE





Case Outline and Dimensions - TO-254AA

Voltage Ratings

Part Number		35SGQ060
V_R	DC Reverse Voltage (V), maximum	60
V_{RRM}	Working Peak Reverse Voltage (V), maximum	

Absolute Maximum Ratings

Parameter		Limits	Units	Conditions
$I_{F(AV)}$	Maximum Average Forward Current See Fig. 5	35	A	50% duty cycle @ T_C = 79°C, square waveform
I_{FSM}	Maximum Peak One Cycle Non - Repetitive Surge Current	400	A	tp = 8.3 ms half-sine

Electrical Specifications

Parameter		Limits	Units	Conditions	
V_{FM}	Maximum Forward Voltage Drop See Fig. 1 ①	0.88	V	I_F = 35A	T_J = -55°C
		1.23	V	I_F = 70A	
		0.83	V	I_F = 35A	T_J = 25°C
		1.29	V	I_F = 70A	
		0.92	V	I_F = 35A	T_J = 125°C
		1.46	V	I_F = 70A	
I_{RM}	Maximum Reverse Leakage Current See Fig. 2①	0.5	mA	T_J = 25°C	V_R = rated V_R
		44	mA	T_J = 100°C	
		275	mA	T_J = 125°C	
C_J	Maximum Junction Capacitance	2300	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

Parameter		Limits	Units	Conditions
T_J	Maximum Junction Temperature Range	-55 to 150	°C	
T_{stg}	Maximum Storage Temperature Range	-55 to 150	°C	
R_{thJC}	Maximum Thermal Resistance, Junction to Case	1.1	°C/W	DC operation See Fig. 4
Wt	Weight, typical	9.3	g	
	Die Size (Typical)	200 X 200	mils	
	Case Style	T0-254AA		

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

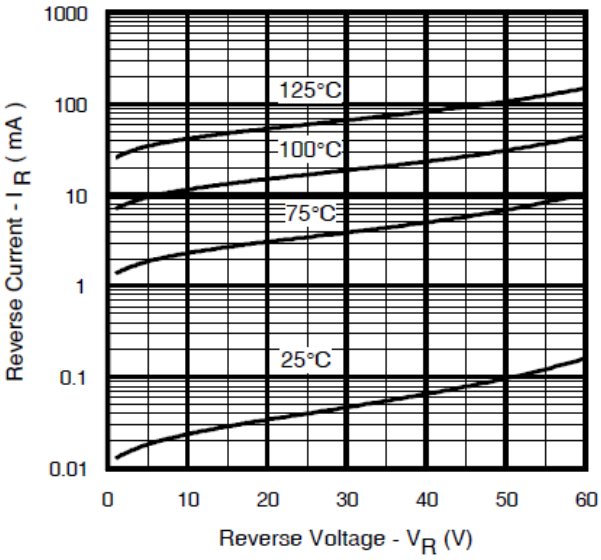


Fig 2. Typical Values of Reverse Current Vs. Reverse Voltage

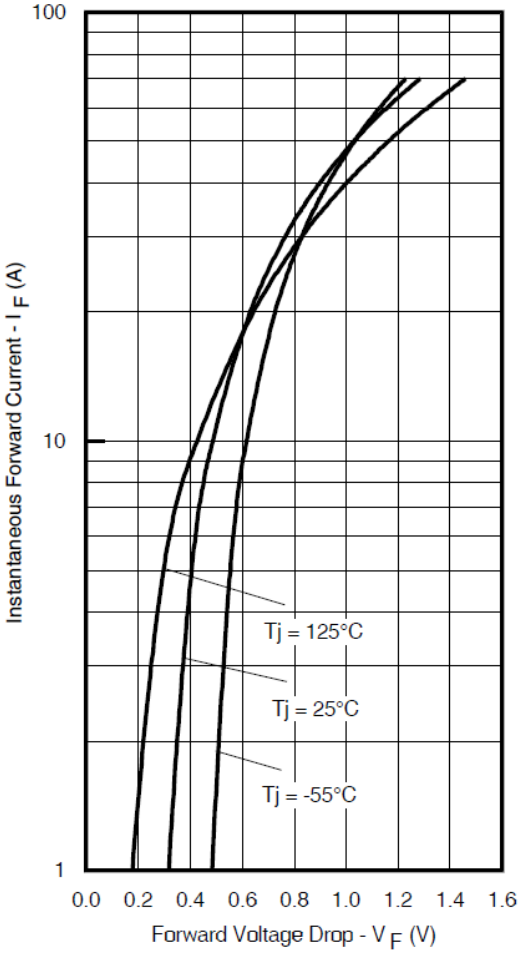


Fig 1. Max. Forward Voltage Drop Characteristics

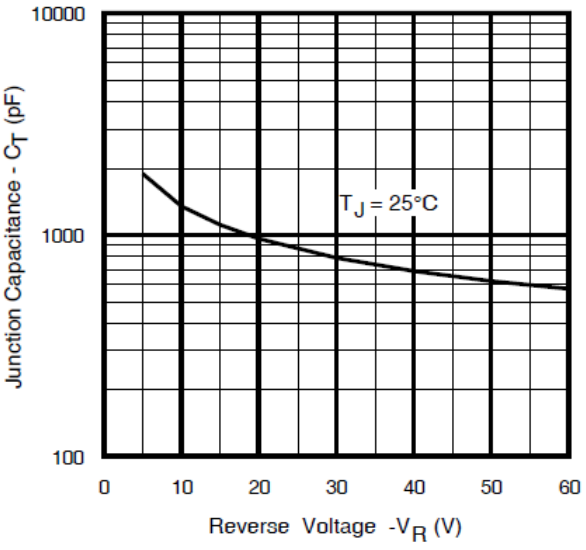


Fig 3. Typical Junction Capacitance Vs. Reverse Voltage

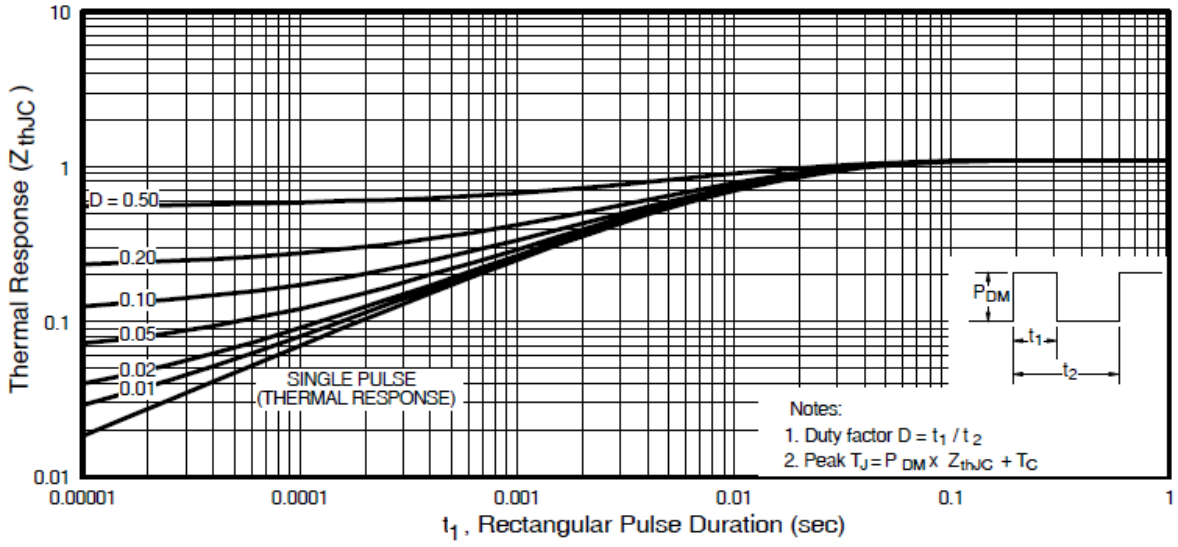


Fig 4. Max. Thermal Impedance Z_{thJC} Characteristics

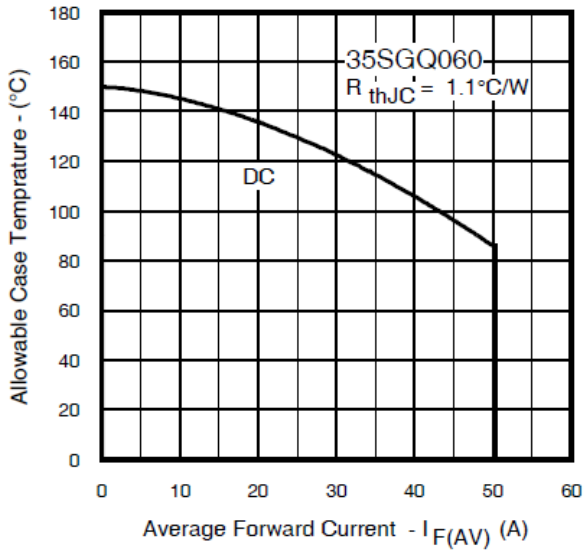


Fig 5. Max. Allowable Case Temperature
Vs. Average Forward Current

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