PD -94220A

International
IOR Rectifier

SCHOTTKY RECTIFIER
HIGH EFFICIENCY SERIES

35SGQ060

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 @ 35Apk, T_J =125°C	0.92	V
T_J, T_{stg} Operating and storage	-55 to 150	°C

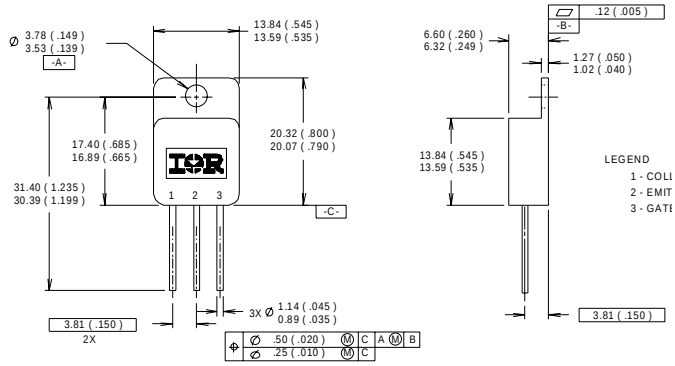
Description/Features

The 35SGQ060 Schottky rectifier has been expressly designed to meet the rigorous requirements of hi-rel environments. It is packaged in the hermeticly 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.

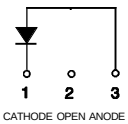
- Hermetically Sealed
- Low Forward Voltage Drop
- High Frequency Operation
- Guard Ring for Enhanced Ruggedness and Long term Reliability
- Lightweight

CASE STYLE





NOTES:
1. DIMENSIONING & TOLERANCING PER ANSI Y14.5M-1994.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSIONS ARE SHOWN IN MILLIMETERS [INCHES].
4. OUTLINE CONFORMS TO JEDEC OUTLINE TO-257AA.



IR Case Style TO-254AA

08/27/01

Voltage Ratings

	Part number	35SGQ060
V_R	Max. DC Reverse Voltage (V)	60
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 = 79°C, square waveform
I_{FSM}	Max. Peak One Cycle Non - Repetitive Surge Current	400	A	@ t_p = 8.3 ms half-sine

Electrical Specifications

	Parameters	Limits	Units	Conditions	
V_{FM}	Max. Forward Voltage Drop See Fig. 1①	0.88	V	@ 35A	T_J = -55°C
		1.23	V	@ 70A	
		0.83	V	@ 35A	T_J = 25°C
		1.29	V	@ 70A	
		0.92	V	@ 35A	T_J = 125°C
		1.46	V	@ 70A	
I_{RM}	Max. Reverse Leakage Current See Fig. 2①	0.5	mA	T_J = 25°C	V_R = rated V_R
		44	mA	T_J = 100°C	
		175	mA	T_J = 125°C	
C_T	Max. 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

	Parameters	Limits	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	1.1	°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%

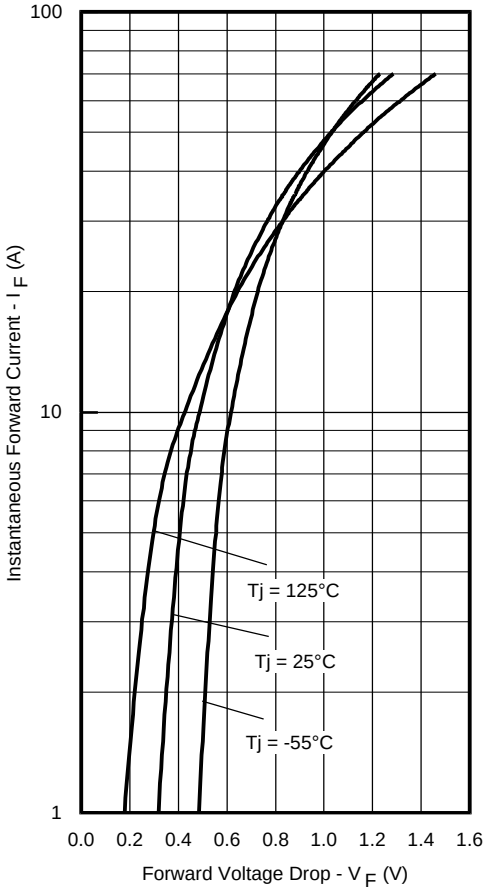


Fig. 1 - Max. Forward Voltage Drop Characteristics

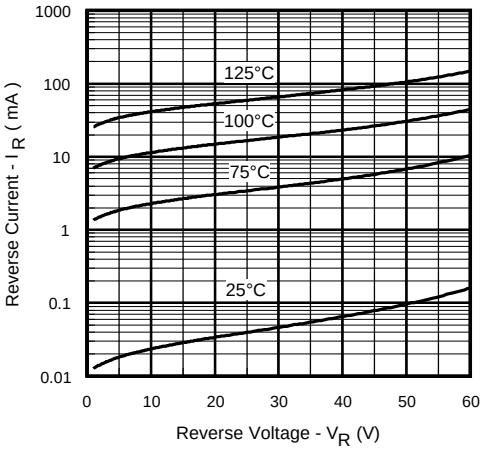


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

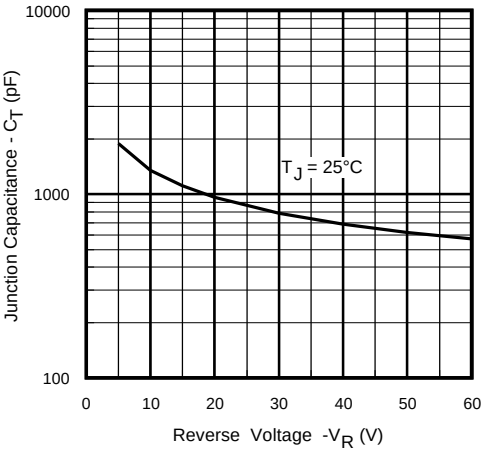


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

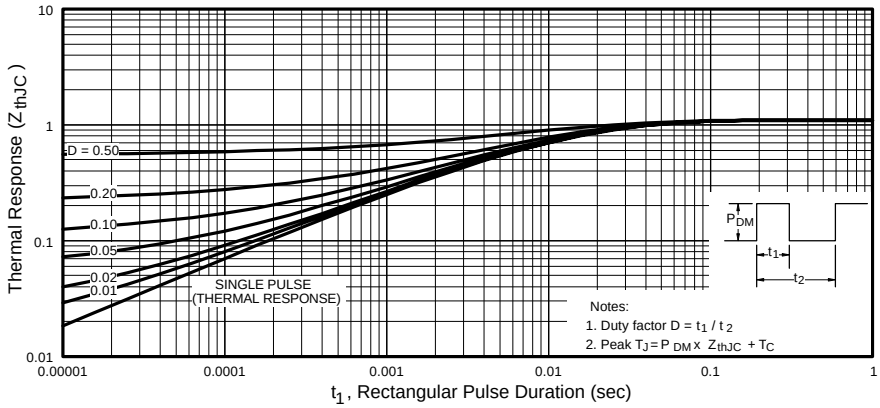


Fig. 4 - Max. Thermal Impedance Z_{thJC} Characteristics

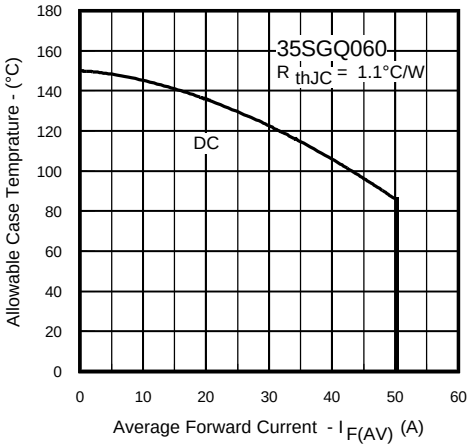


Fig. 5 - Max. Allowable Case Temperature Vs.
Average Forward Current

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