PD-94068A

International
IOR Rectifier

SCHOTTKY RECTIFIER
HIGH EFFICIENCY SERIES

75SLQ030

75 Amp, 30V

Major Ratings and Characteristics

Characteristics	75SLQ030	Units
$I_{F(AV)}$	75	A
V_{RRM}	30	V
I_{FSM} @ tp = 8.3ms half-sine	600	A
V_F @ 75Apk, T_J =125°C	0.51	V
T_J, T_{stg} Operating and storage	-55 to 150	°C

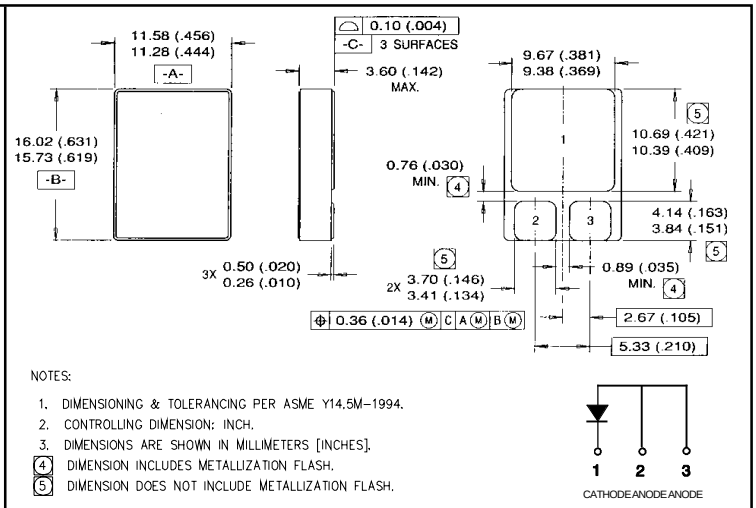
Description/Features

The 75SLQ030 Schottky rectifier has been expressly designed to meet the rigorous requirements of hi-rel environments. It is packaged in the hermetic surface mount SMD-1 ceramic 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
- Surface Mount
- Lightweight

CASE STYLE





NOTES:
1. DIMENSIONING & TOLERANCING PER ASME Y14.5M–1994.
2. CONTROLLING DIMENSION: INCH.
3. DIMENSIONS ARE SHOWN IN MILLIMETERS [INCHES].
4. DIMENSION INCLUDES METALLIZATION FLASH.
5. DIMENSION DOES NOT INCLUDE METALLIZATION FLASH.

IR Case Style SMD-1

6/29/01

Voltage Ratings

	Part number	75SLQ030
V_R	Max. DC Reverse Voltage (V)	30
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	75	A	50% duty cycle @ T_C = 82°C, square waveform
I_{FSM}	Max. Peak One Cycle Non - Repetitive Surge Current	600	A	@ t_p = 8.3 ms half-sine

Electrical Specifications

	Parameters	Limits	Units	Conditions	
V_{FM}	Max. Forward Voltage Drop See Fig. 1①	0.65	V	@ 75A	T_J = -55°C
		0.82	V	@ 150A	
		0.59	V	@ 75A	T_J = 25°C
		0.79	V	@ 150A	
		0.51	V	@ 75A	T_J = 125°C
		0.77	V	@ 150A	
I_{RM}	Max. Reverse Leakage Current See Fig. 2①	1.0	mA	T_J = 25°C	V_R = rated V_R
		100	mA	T_J = 100°C	
		300	mA	T_J = 125°C	
C_T	Max. Junction Capacitance	3650	pF	V_R = 5V_{DC} (1MHz, 25°C)	
L_S	Typical Series Inductance	5.9	nH	Measured from center of cathode pad to center of anode pad	

Thermal-Mechanical Specifications

	Parameters	Limits	Units	Conditions
T_J	Max.Junction Temperature Range	-55 to 150	℃	
T_{stg}	Max. Storage Temperature Range	-55 to 150	℃	
R_{thJC}	Max. Thermal Resistance, Junction to Case	1.1	°C/W	DC operation See Fig. 4
wt	Weight (Typical)	2.6	g	
	Die Size (Typical)	200X200	mils	
	Case Style	SMD-1		

① Pulse Width < 300µs, Duty Cycle < 2%
② Pins 2 and 3 externally tied together

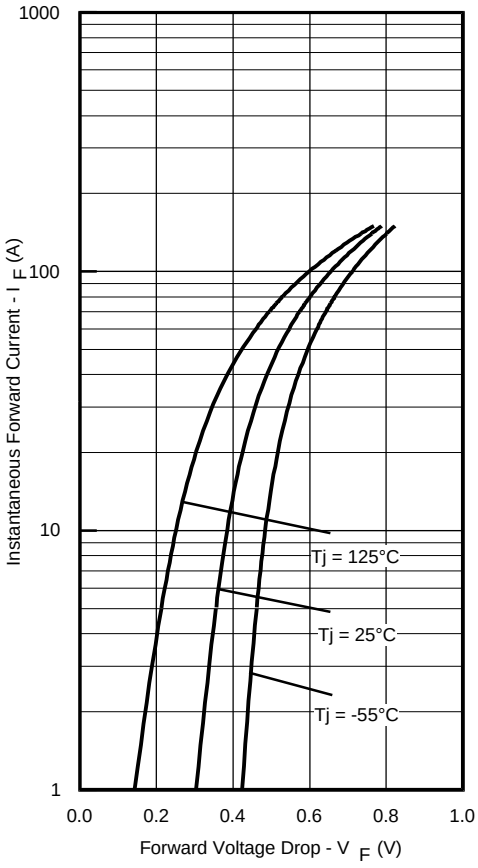


Fig. 1 - Max. Forward Voltage Drop Characteristics

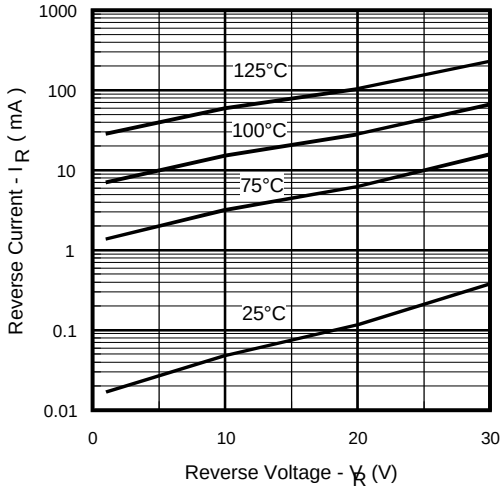


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

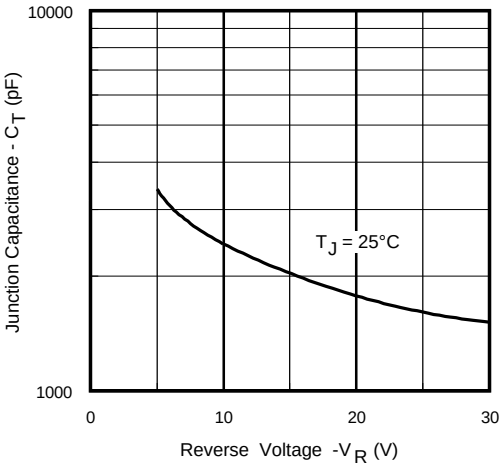


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

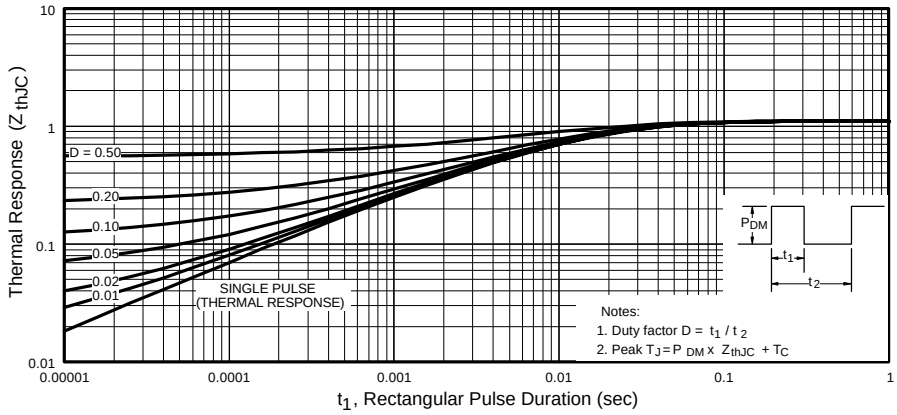


Fig. 4 - Max. Thermal Impedance Z_{thJC} Characteristics

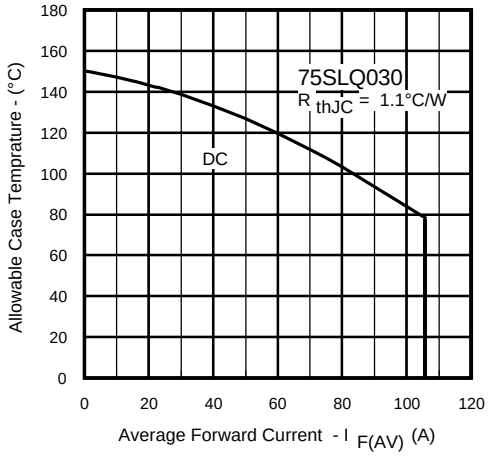


Fig. 5 - Max. Allowable Case Temperature Vs.
Average Forward Current

IR WORLD HEADQUARTERS: 233 Kansas St., El Segundo, California 90245, USA Tel: (310) 252-7105
TAC Fax: (310) 252-7903
Visit us at www.irf.com for sales contact information.
Data and specifications subject to change without notice. 6/01