

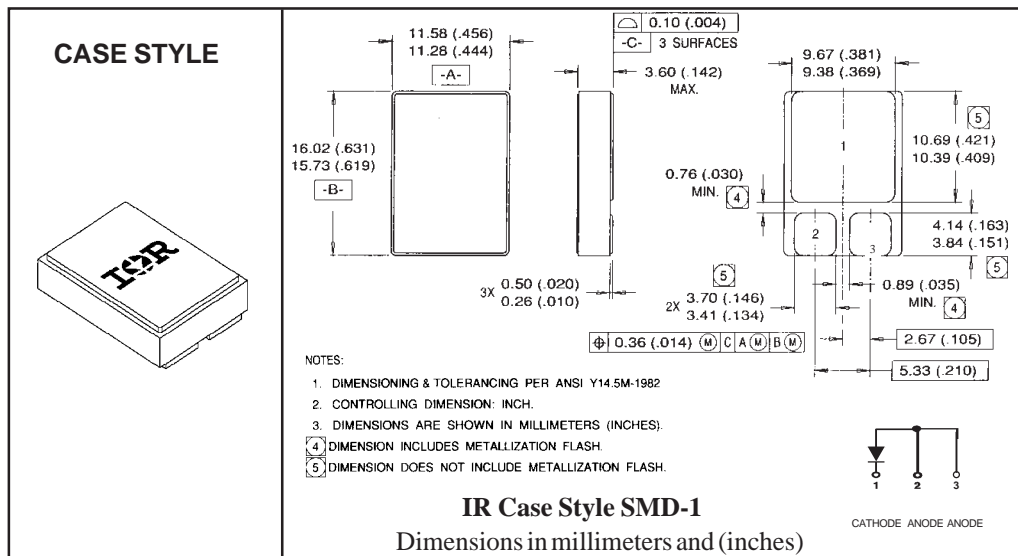
**Major Ratings and Characteristics**

Characteristics	60LQ100	Units
$I_{F(AV)}$ Rectangular waveform	60	A
$V_{RRM}$	100	V
$I_{FSM}$ @ $t_p = 8.3ms$ sine	400	A
$V_F$ @ 60Apk, $T_J = 125^\circ C$ (Per Leg)	0.70	V
$T_J, T_{stg}$ Operating and storage	-55 to 150	$^\circ C$

**Description/Features**

The 60LQ100 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 and has extremely low reverse leakage at high temperature. Full MIL-PRF-19500 quality conformance testing is available on source control drawings to JANTX, JANTXV and S 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
- Surface Mount
- Lightweight



**Voltage Ratings**

Part number	60LQ100
$V_R$ Max. DC Reverse Voltage (V)	100
$V_{RWM}$ Max. Working Peak Reverse Voltage (V)	

**Absolute Maximum Ratings**

Parameters	60LQ100	Units	Conditions
$I_{F(AV)}$ Max. Average Forward Current See Fig. 5	60	A	50% duty cycle @ $T_C = 102^\circ\text{C}$ , rectangular waveform ②
$I_{FSM}$ Max. Peak One Cycle Non - Repetitive Surge Current	400	A	@ $t_p = 8.3$ ms sine ②

**Electrical Specifications**

Parameters	60LQ045	Units	Conditions	
$V_{FM}$ Max. Forward Voltage Drop See Fig. 1①	0.62	V	@ 10A	$T_J = 25^\circ\text{C}$ ②
	0.95	V	@ 60A	
	1.15	V	@ 120A	
	0.68	V	@ 10A	$T_J = -55^\circ\text{C}$ ②
	0.70	V	@ 60A	$T_J = 125^\circ\text{C}$ ②
	0.97	V	@ 120A	
$I_{RM}$ Max. Reverse Leakage Current See Fig. 2①	0.8	mA	$T_J = 25^\circ\text{C}$	$V_R = \text{rated } V_R$ ②
	45	mA	$T_J = 125^\circ\text{C}$	
$C_T$ Max. Junction Capacitance	1400	pF	$V_R = 5V_{DC}$ , ( 100KHz to 1MHz) $25^\circ\text{C}$ ②	
$L_S$ Typical Series Inductance	2.8	nH	Measured from center of bond pad to end of anode bonding wire	

**Thermal-Mechanical Specifications**

Parameters	60LQ100	Units	Conditions
$T_J$ Max. Junction Temperature Range	-55 to 150	$^\circ\text{C}$	
$T_{stg}$ Max. Storage Temperature Range	-55 to 150	$^\circ\text{C}$	
$R_{thJC}$ Max. Thermal Resistance, Junction to Case	1.0	$^\circ\text{C}/\text{W}$	DC operation See Fig. 4
$R_{thJC}$ Max. Thermal Resistance, Junction to case	0.50	$^\circ\text{C}/\text{W}$	DC operation
$w_t$ Weight (Typical)	2.6	g	
Die Description (Square)	0.20	inches	
Case Style	SMD-1		

① Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%

② Pins 2 and 3 externally tied together

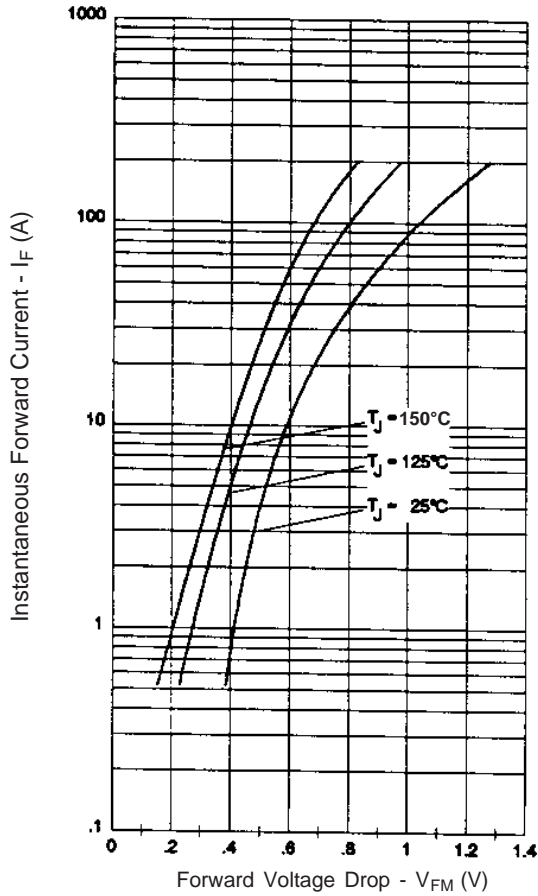


Fig. 1 - Max. Forward Voltage Drop Characteristics

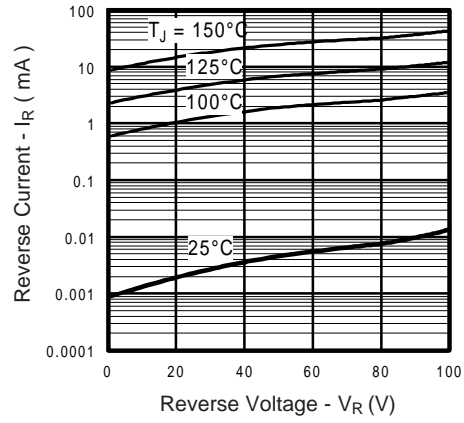


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

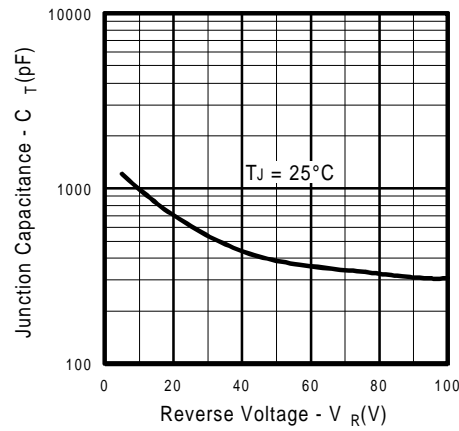


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

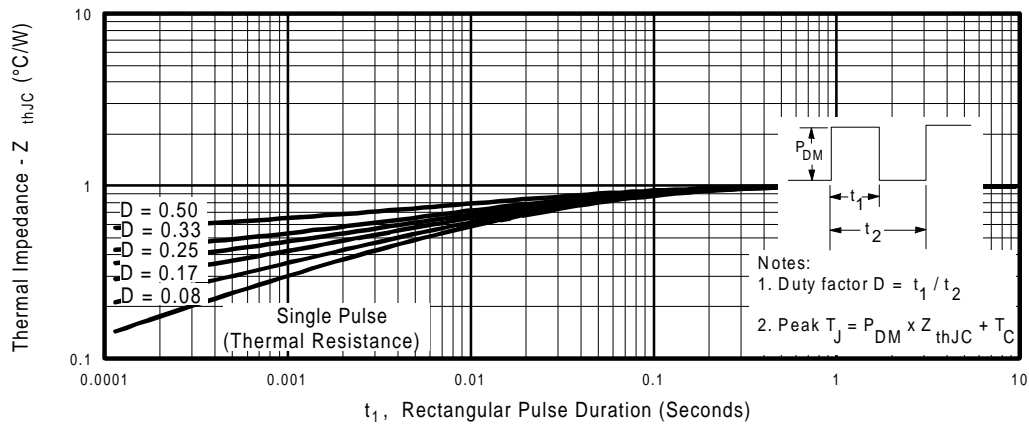


Fig. 4 - Max. Thermal Impedance  $Z_{thJC}$  Characteristics

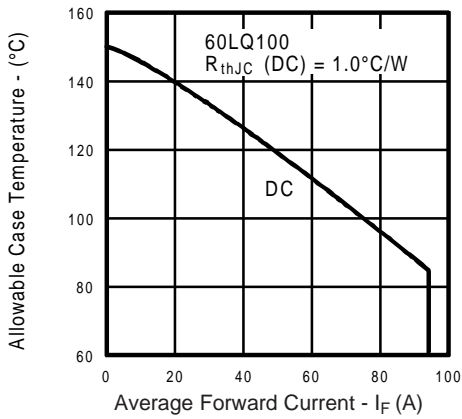


Fig. 5 - Max. Allowable Case Temperature Vs. Average Forward Current

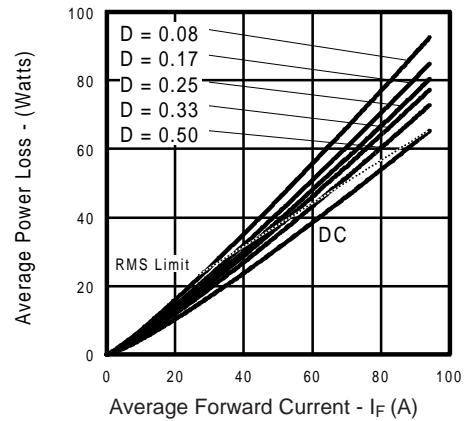


Fig. 6 - Forward Power Loss Characteristics