

International  
**IR** Rectifier  
 SCHOTTKY RECTIFIER  
 HIGH EFFICIENCY SERIES

PD -20350C

8EQ045

10A, 45V

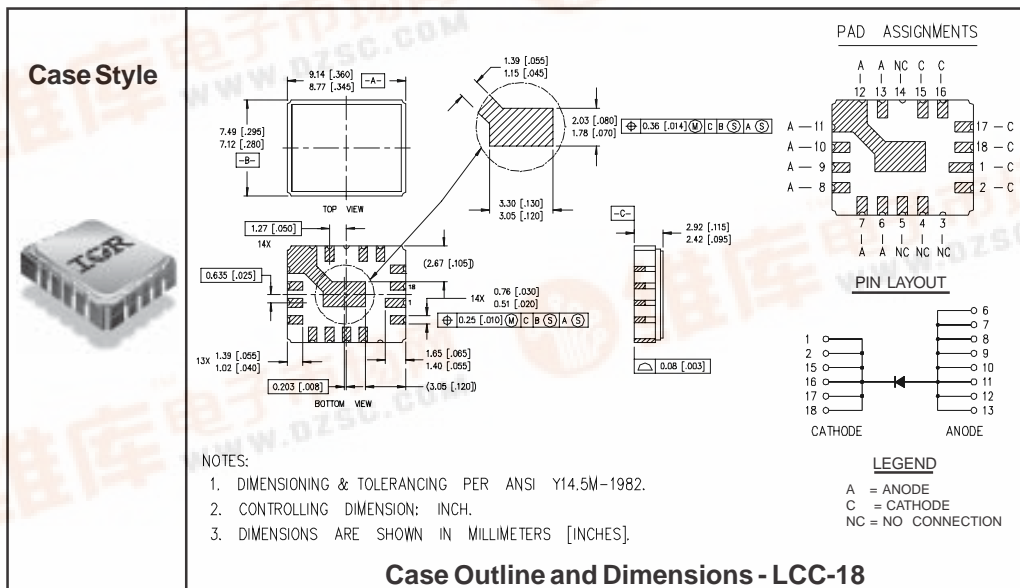
Major Ratings and Characteristics

Characteristics	8EQ045	Units
$I_{F(AV)}$	10	A
$V_{RRM}$	45	V
$I_{FSM}$ @ $t_p = 8.3ms$ half-sine	250	A
$V_F$ @ 10Apk, $T_J = 125^\circ C$	0.58	V
$T_J, T_{stg}$ Operating and storage	-55 to 150	$^\circ C$

Description/Features

The 8EQ045 Schottky rectifier has been expressly designed to meet the rigorous requirements of hi-rel environments. It is packaged in the hermetic isolated LCC-18 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 resonant power converters. Full MIL-PRF-19500 quality conformance testing is available on source controlled drawings to TX, TXV and S levels.

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



8EQ045

International  
IOR Rectifier**Voltage Ratings**

Part number	8EQ045
V <sub>R</sub> Max. DC Reverse Voltage (V)	45
V <sub>RWM</sub> Max. Working Peak Reverse Voltage (V)	

**Absolute Maximum Ratings**

Parameters	Limits	Units	Conditions
I <sub>F(AV)</sub> Max. Average Forward Current See Fig. 5	10	A	50% duty cycle @ T <sub>C</sub> = 100°C, rectangular waveform
I <sub>FSM</sub> Max. Peak One Cycle Non - Repetitive Surge Current	250	A	@ t <sub>p</sub> = 8.3 ms half-sine

**Electrical Specifications**

Parameters	Limits	Units	Conditions	
V <sub>FM</sub> Max. Forward Voltage Drop See Fig. 1 ①	0.65	V	@ 10A	T <sub>J</sub> = 25°C
	0.84	V	@ 20A	
	0.58	V	@ 10A	T <sub>J</sub> = 125°C
	0.77	V	@ 20A	
I <sub>RM</sub> Max. Reverse Leakage Current See Fig. 2 ①	0.5	mA	T <sub>J</sub> = 25°C	V <sub>R</sub> = rated V <sub>R</sub>
	15	mA	T <sub>J</sub> = 125°C	
C <sub>T</sub> Max. Junction Capacitance	900	pF	V <sub>R</sub> = 5V <sub>DC</sub> (1MHz, 25°C)	
L <sub>S</sub> Typical Series Inductance	4.3	nH	Measured from center of cathode pad to center of anode pad	

**Thermal-Mechanical Specifications**

Parameters	Limits	Units	Conditions	
T <sub>J</sub> Max. Junction Temperature Range	-55 to 150	°C		
T <sub>stg</sub> Max. Storage Temperature Range	-55 to 150	°C		
R <sub>thJC</sub> Max. Thermal Resistance, Junction to Case	6.0	°C/W	DC operation	See Fig. 4
wt Weight (Typical)	0.42	g		
Die Size	125X125	mils		
Case Style	LCC-18			

① Pulse Width &lt; 300μs, Duty Cycle &lt; 2%

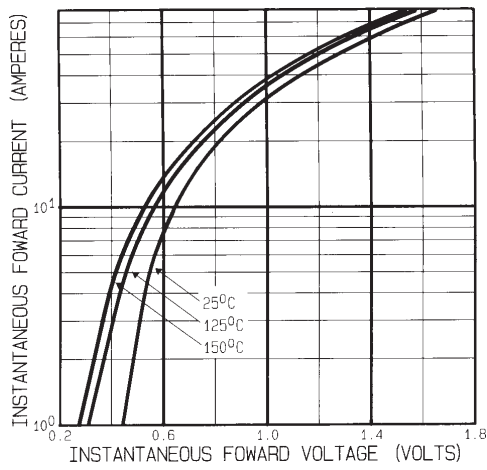


Fig. 1 - Max. Forward Voltage Drop Characteristics

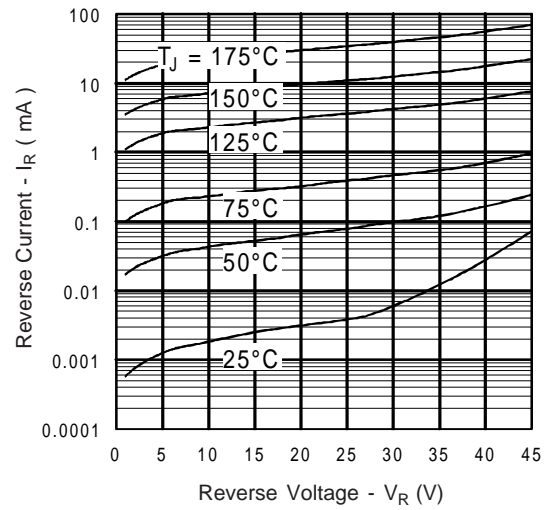


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

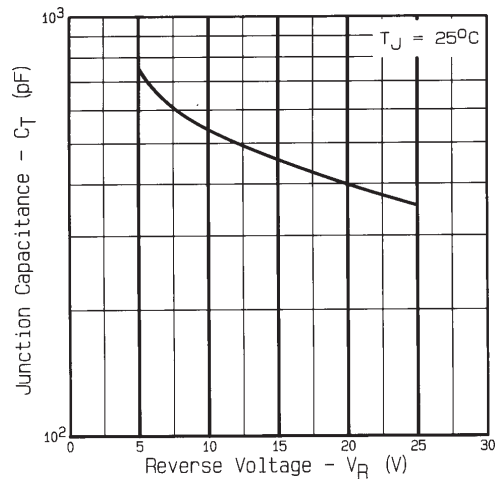


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

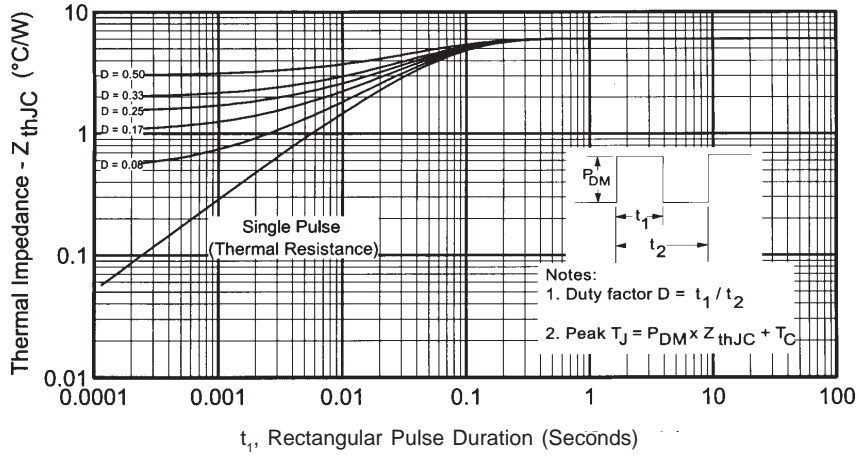


Fig. 4 - Max. Thermal Impedance  $Z_{thJC}$  Characteristics

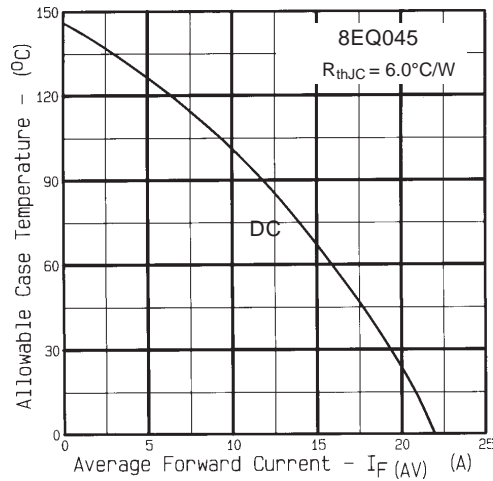


Fig. 5 - Max. Allowable Case Temperature Vs. Average Forward Current