

SCHOTTKY RECTIFIER

8CLJQ045

8 Amp

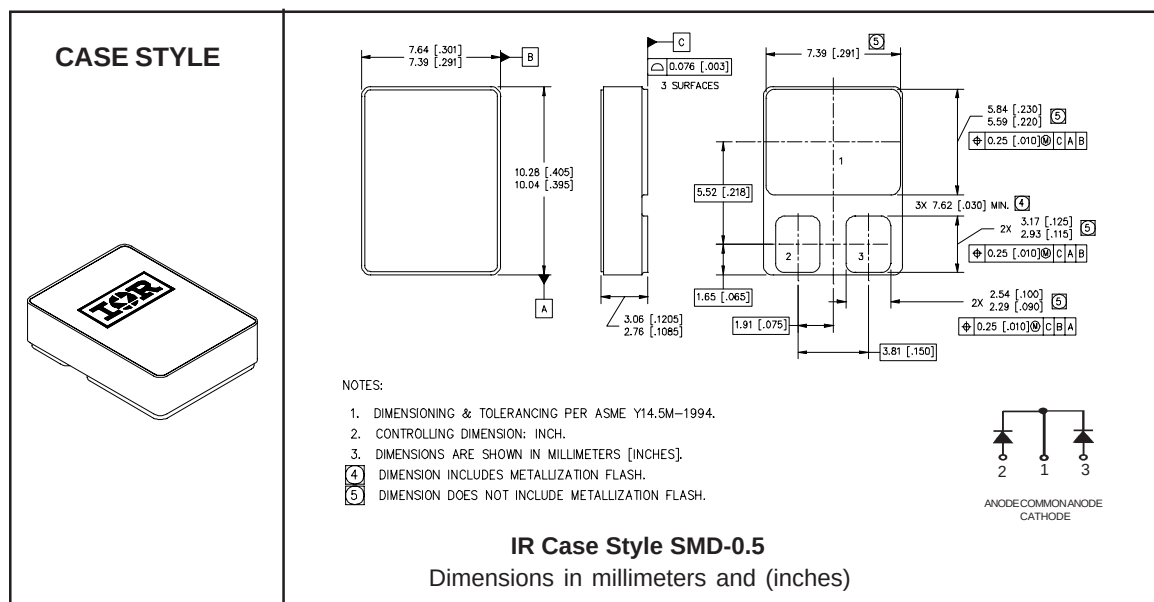
Major Ratings and Characteristics

Characteristics	8CLJQ045	Units
$I_{F(AV)}$ Rectangular waveform	8	A
V_{RRM}	45	V
I_{FSM} @ $t_p = 8.3ms$ sine	80	A
V_F @ 8Apk, $T_J = 125^\circ C$ (Per Leg)	0.92	V
T_J, T_{stg} Operating and Storage	-55 to 150	$^\circ C$

Description/Features

The 8CLJQ045 center tap Schottky rectifier has been expressly designed to meet the rigorous requirements of hi-rel environments. It is packaged in the hermetic surface mount SMD-0.5 ceramic package. Full MIL-PRF-19500 quality conformance testing is available on source control drawings to JANTX, JANTXV, or JANS levels. Typical applications include switching power supplies and resonant power converters.

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



Voltage Ratings

Part Number		8CLJQ045
V_R	Max. DC Reverse Voltage (V) (Per Leg)	45
V_{RWM}	Max. Working Peak Reverse Voltage (V) (Per Leg)	

Absolute Maximum Ratings

Parameters	8CLJQ045	Units	Conditions
$I_{F(AV)}$ Max. Average Forward Current	8.50	A	50% duty cycle @ $T_C = 100^\circ\text{C}$, rectangular waveform
I_{FSM} Max. Peak One Cycle Non - Repetitive Surge Current (Per Leg)	80	A	@ $t_p = 8.3$ ms sine

Electrical Specifications

Parameters	8CLJQ045	Units	Conditions
V_{FM} Max. Forward Voltage Drop (Per Leg) See Fig. 1 ①	0.67	V	@ 4A
	0.96	V	@ 8A
	0.58	V	@ 4A
	0.92	V	@ 8A
I_{RM} Max. Reverse Leakage Current (Per Leg) See Fig. 2 ①	0.15	mA	$T_J = 25^\circ\text{C}$
	43	mA	$T_J = 125^\circ\text{C}$
C_T Max. Junction Capacitance (Per leg)	760	pF	$V_R = 5V_{DC}$, (test signal range 100KHz to 1MHz) 25°C
L_S Typical Series Inductance (Per leg)	9.2	nH	Measured from center of bond pad to end of anode bonding wire

Thermal-Mechanical Specifications

Parameters	8CLJQ045	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 (Per leg)	3.73	$^\circ\text{C/W}$	DC operation See Fig. 4
wt Weight (Typical)	1.0	g	
Die Description (Square)	0.06	inches	
Case Style	SMD-0.5		

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

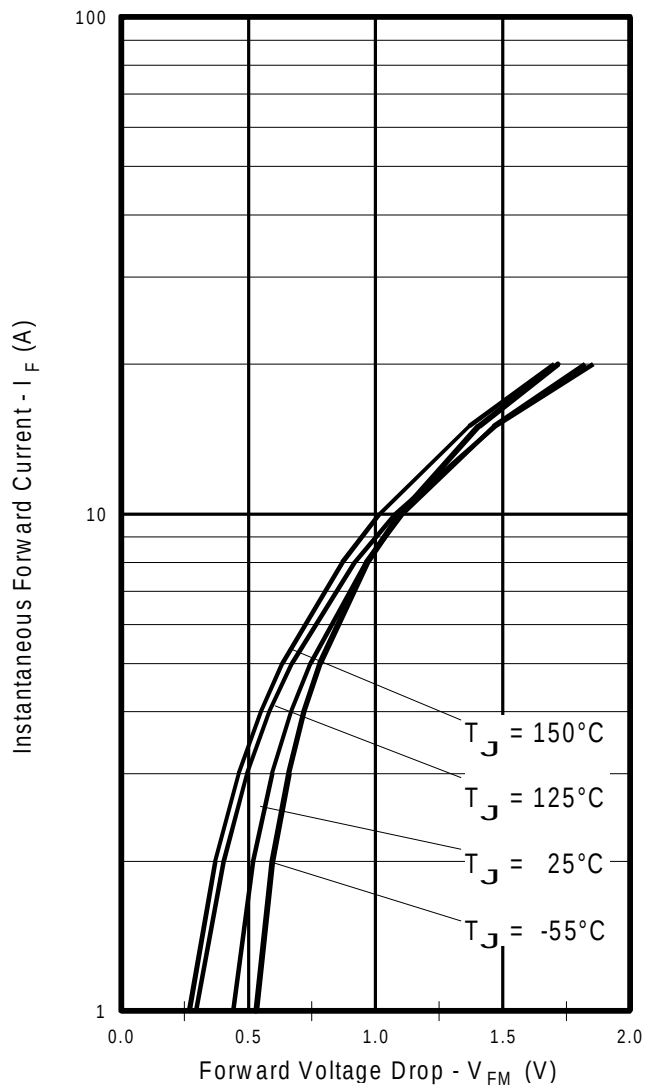


Fig. 1 - Max. Forward Voltage Drop Characteristics
(Per Leg)

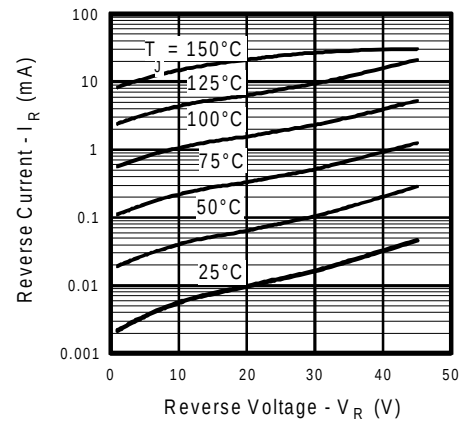


Fig. 2 - Typical Values of Reverse Current
Vs. Reverse Voltage (Per Leg)

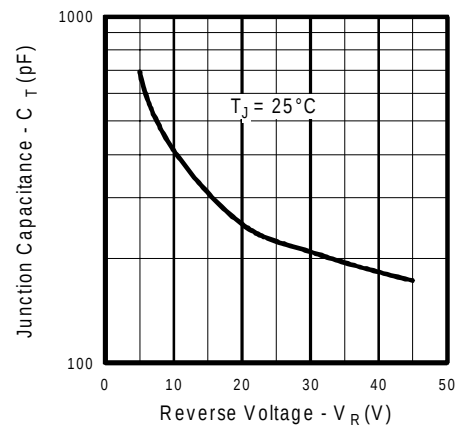
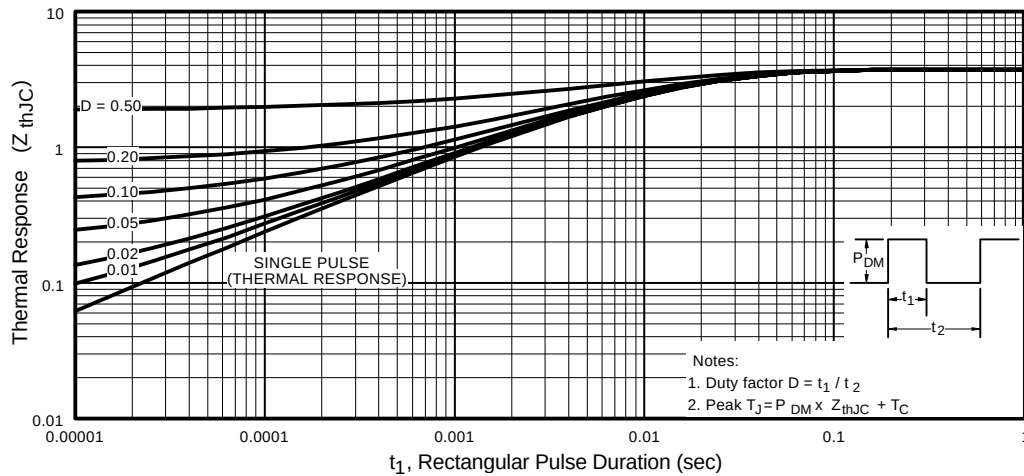
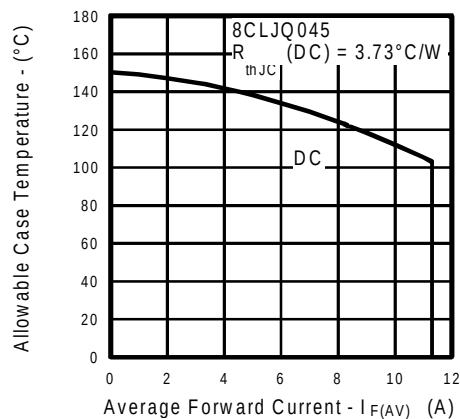


Fig. 3 - Typical Junction Capacitance
Vs. Reverse Voltage (Per Leg)

Fig.4 - Max. Thermal Impedance Z_{thJC} Characteristics (Per Leg)Fig. 5 - Max. Allowable Case Temperature Vs.
Average Forward Current (Per Leg)