International
IOR Rectifier

PD-94304E

SCHOTTKY RECTIFIER
HIGH EFFICIENCY SERIES

30CLJQ045
JANS1N7064CCU3
JANTX1N7064CCU3
JANTXV1N7064CCU3

30Amp, 45V

Ref: MIL-PRF-19500/754

Major Ratings and Characteristics

Characteristics	1N7064CCU3	Units
$I_{F(AV)}$	30	A
V_{RRM} (Per Leg)	45	V
I_{FSM} @ tp = 8.3ms half-sine (Per Leg)	85	A
V_F @ 30Apk, T_J = 125°C (Per Leg)	0.95	V
T_J, T_{STG} Operating and Storage	-65 to 150	°C

Additional Product Summary (Parts with Ceramic Lids) *

Part Number
30CLJCQ045
JANTX1N7064CCU3C
JANTXV1N7064CCU3C
JANS1N7064CCU3C

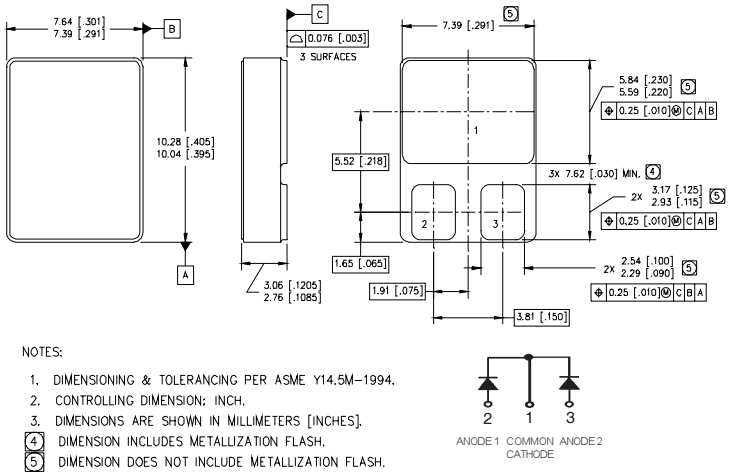
Description/Features

The 1N7064CCU3 center tap Schottky rectifier has been expressly designed to meet the rigorous requirements of high reliability environments. It is packaged in the hermetic surface mount SMD-0.5 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
- Center Tap
- Low Forward Voltage Drop
- High Frequency Operation
- Guard Ring for Enhanced Ruggedness and Long Reliabiltiy
- Surface Mount
- Lightweight
- ESD Rating: Class NS per MIL-STD-750, Method 1020

*** Refer to Page 5 for Case Outline and Dimensions of SMD-0.5 with Ceramic Lid**

CASE STYLE



Case Outine and Dimensions (Metal Lid) - SMD-0.5

Voltage Ratings

	Part number	1N7064CCU3
V_R	Max. DC Reverse Voltage (V) (Per Leg)	45
V_{RWM}	Max. Working Peak Reverse Voltage (V) (Per Leg)	

Absolute Maximum Ratings

	Parameters	Limits	Units	Conditions
$I_{F(AV)}$	Max. Average Forward Current See Fig. 5	30	A	50% duty cycle @ T_C = 87.6°C, square waveform
I_{FSM}	Max. Peak One Cycle Non - Repetitive Surge Current (Per Leg)	85	A	@ t_p = 8.3 ms half-sine

Electrical Specifications

	Parameters	Limits	Units	Conditions	
V_{FM}	Max. Forward Voltage Drop (Per Leg) See Fig. 1①	0.72	V	@ 10A	T_J = -55°C
		0.81	V	@ 15A	
		1.09	V	@ 30A	
		0.68	V	@ 10A	T_J = 25°C
		0.8	V	@ 15A	
		1.09	V	@ 30A	
		0.62	V	@ 10A	T_J = 125°C
		0.72	V	@ 15A	
		0.95	V	@ 30A	
I_{RM}	Max. Reverse Leakage Current (Per Leg) See Fig. 2①	0.08	mA	T_J = 25°C	V_R = Rated V_R
		10	mA	T_J = 125°C	
C_T	Max. Junction Capacitance (Per Leg)	375	pF	V_R = 5V_{DC} (1MHz, 25°C)	
L_S	Typical Series Inductance (Per Leg)	4.8	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	-65 to 150	°C	
T_{stg}	Max. Storage Temperature Range	-65 to 150	°C	
R_{thJC}	Max. Thermal Resistance, Junction to Case (Per Leg)	3.5	°C/W	DC operation See Fig. 4
R_{thJC}	Max. Thermal Resistance, Junction to Case (Per Package)	1.75	°C/W	DC operation
wt	Weight (Typical)	1.0	g	
	Die Size (Typical)	70X92	mils	
	Case Style	SMD-0.5		

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

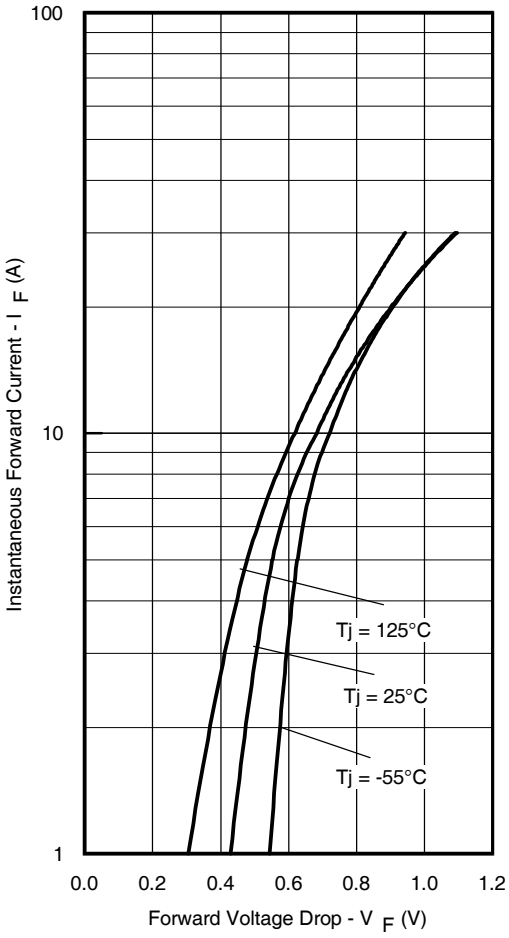


Fig. 1 - Max. Forward Voltage Drop Characteristics (Per Leg)

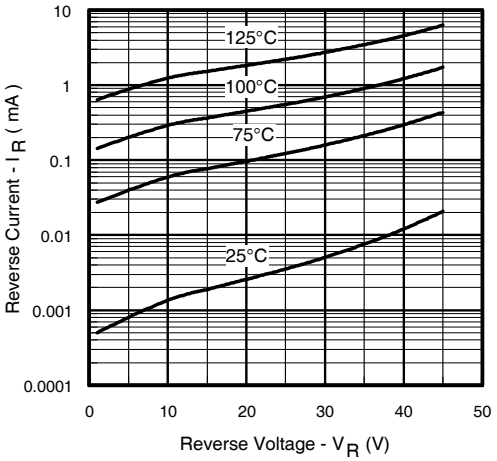


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage (Per Leg)

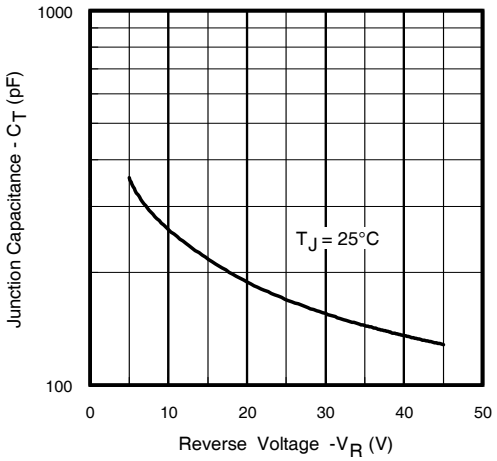


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage (Per Leg)

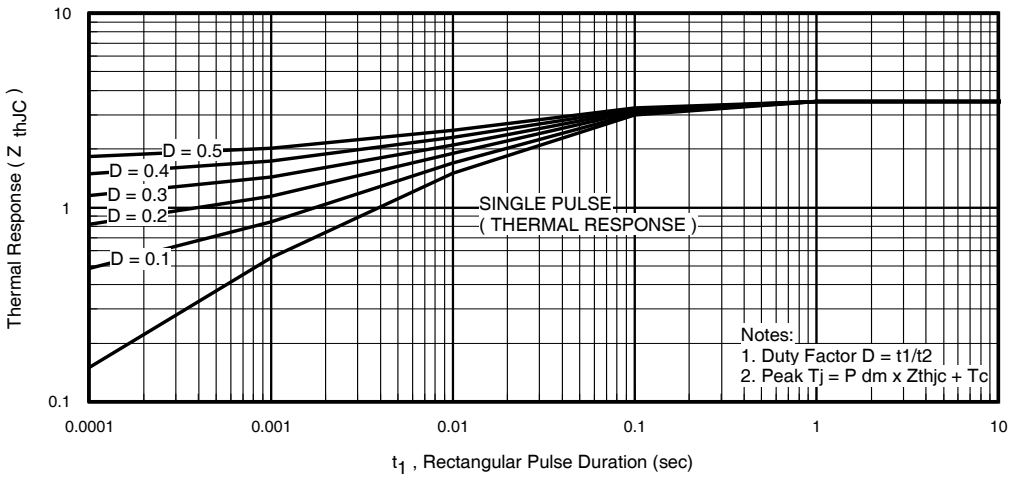


Fig. 4 - Max. Thermal Impedance Z_{thJC} Characteristics (Per Leg)

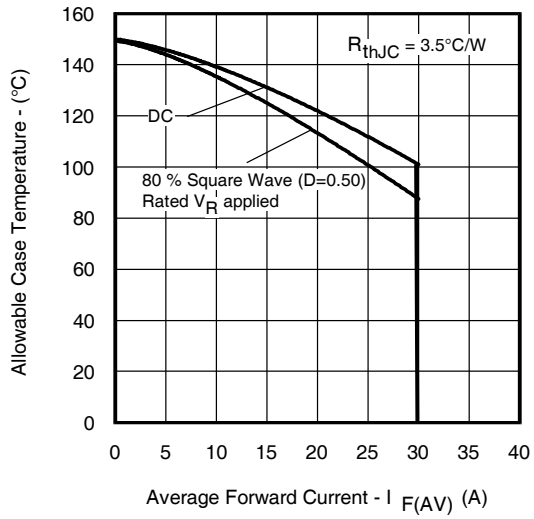
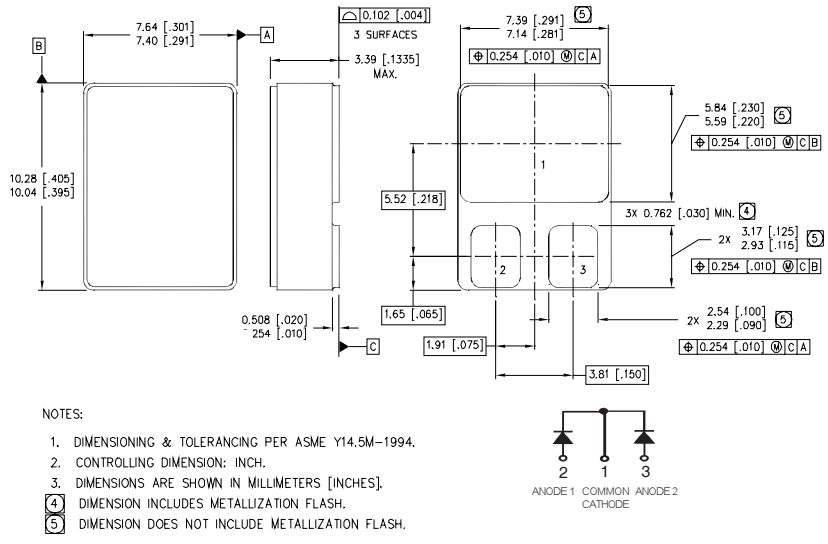


Fig. 5 - Max. Allowable Case Temperature Vs.
Average Forward Current (Per Leg)



Case Outine and Dimensions (Ceramic Lid) - SMD-0.5

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IR WORLD HEADQUARTERS: 233 Kansas St., El Segundo, California 90245, USA Tel: (310) 252-7105
IR LEOMINSTER : 205 Crawford St., Leominster, Massachusetts 01453, USA Tel: (978) 534-5776
TAC Fax: (310) 252-7903
Visit us at www.irf.com for sales contact information.
Data and specifications subject to change without notice. 10/2012