SEMICONDUCTOR

UF5401 THRU UF5408

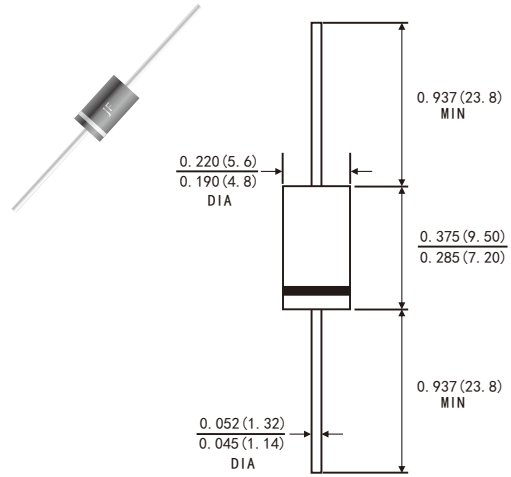
HIGH EFFICIENCY RECTIFIER

Reverse Voltage: 50 to 1000 Volts
Forward Current:3.0Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low forward voltage drop
- High current capability, High reliability
- Low power loss, high efficiency
- High surge current capability
- High speed switching, Low leakage
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

DO-201AD



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: JEDED DO-201AD molded plastic body
- Lead: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.042ounce, 1.19 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25 C ambient temperature unless otherwise specified. Single phase ,half wave ,60Hz,resistive or inductive load. For capacitive load, derate current by 20%.)

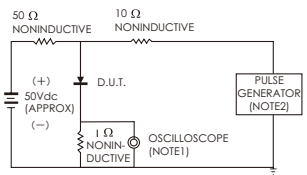
	Symbols	UF 5401	UF 5402	UF 5403	UF 5404	UF 5405	UF 5406	UF 5407	UF 5408	Units
Maximum Recurrent peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm)lead length at T_A=55 C	$I_{(AV)}$	3.0								AmpS
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150.0								Amps
Maximum Instantaneous Forward Voltage at 3.0 A	V_F			1.0		1.3		1.7		Volts
Maximum DC Reverse Current at rated DC blocking voltage T_A=25°C	I_R	10.0								μA
Maximum DC Reverse Current at rated DC blocking voltage T_A=100°C	I_R	150								μA
Maximum reverse recovery time(Note1)	T_{rr}	50					75			ns
Typical junction capacitance(Note2)	C_J	70					50			PF
Operating junction and storage temperature range	T_J T_{STG}	-55 to+125 -55 to+150								°C

Note: 1.Test conditions: I_F=0.5A,I_R=1.0A,I_{RR}=0.25A.

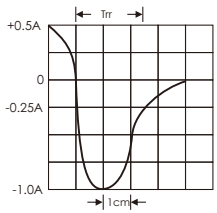
2.Measured at 1MHz and applied reverse voltage of 4.0 Volts.

RATINGS AND CHARACTERISTIC CURVES UF5401 THRU UF5408

FIG.1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.Rise Time=7ns max. input impedance=1 megohm 22pF
2.Rise Time=10ns max. source impedance= 50 ohms



SET TIME BASE FOR 50/100 ns/cm

FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

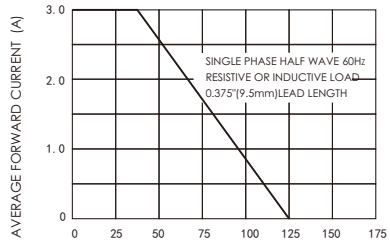


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

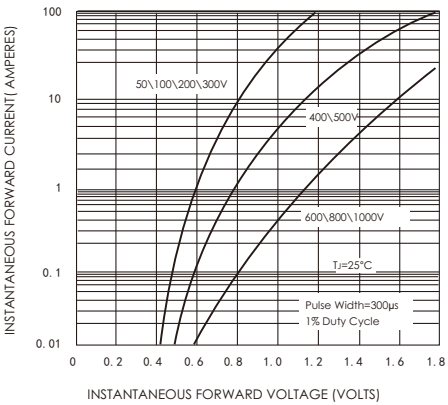


FIG.4-TYPICAL REVERSE CHARACTERISTICS

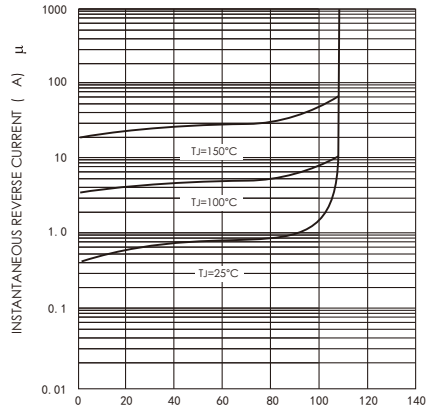


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

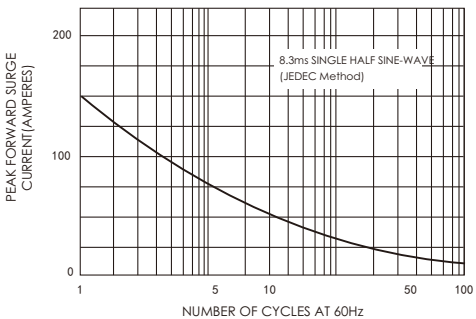


FIG.6-TYPICAL JUNCTION CAPACITANCE