# UF1A – UF1M Taiwan Semiconductor

THERMAL PERFORMANCE					
PARAMETER	SYMBOL	ТҮР	UNIT		
Junction-to-lead thermal resistance	$R_{\Theta JL}$	15	°C/W		
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	60	°C/W		

ELECTRICAL SPECIF PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage <sup>(1)</sup>	UF1A UF1B UF1D UF1G	I <sub>F</sub> = 1A, T <sub>J</sub> = 25°C	V <sub>F</sub>	-	1.0	V
J	UF1J UF1K UF1M			1	1.7	V
Reverse current @ rated V <sub>R</sub> <sup>(2)</sup>		T <sub>J</sub> = 25°C	I <sub>R</sub>		5	μA
		T <sub>J</sub> = 125°C		-	150	μA
Junction capacitance		$1MHz, V_R = 4.0V$	CJ	17	-	pF
Reverse recovery time	UF1A UF1B UF1D UF1G	I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A	t <sub>rr</sub>	-	50	ns
	UF1J UF1K UF1M	I <sub>II</sub> – 0.23A		-	75	ns

## Notes:

- 1. Pulse test with PW = 0.3ms
- 2. Pulse test with PW = 30ms

RDERING INFORMATION			
ORDERING CODE <sup>(1)(2)</sup>	PACKAGE	PACKING	
UF1x	DO-204AL (DO-41)	5,000 / Tape & Reel	
UF1x A0G	DO-204AL (DO-41)	3,000 / Ammo box	
UF1xH	DO-204AL (DO-41)	5,000 / Tape & Reel	
UF1xHA0G	DO-204AL (DO-41)	3,000 / Ammo box	

### Notes:

- 1. "x" defines voltage from 50V (UF1A) to 1000V (UF1M)
- 2. "H" means AEC-Q101 qualified



#### **CHARACTERISTICS CURVES**

 $(T_A = 25^{\circ}C \text{ unless otherwise noted})$ 

**Fig.1 Forward Current Derating Curve** 

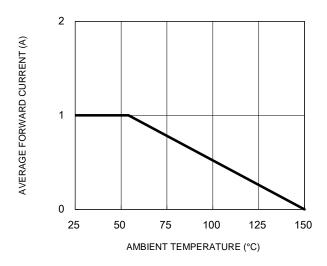


Fig.3 Typical Reverse Characteristics

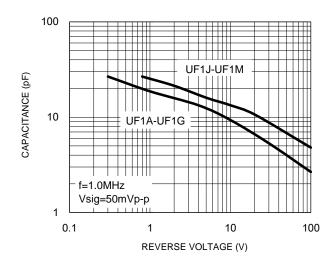
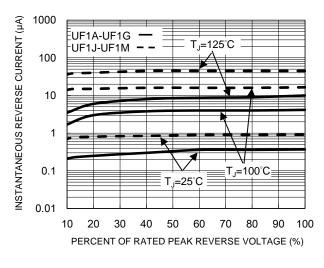


Fig.2 Typical Junction Capacitance

Fig.4 Typical Forward Characteristics



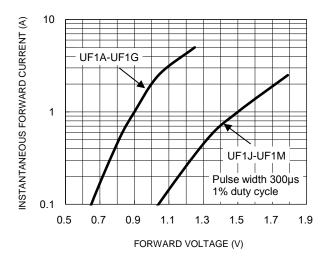
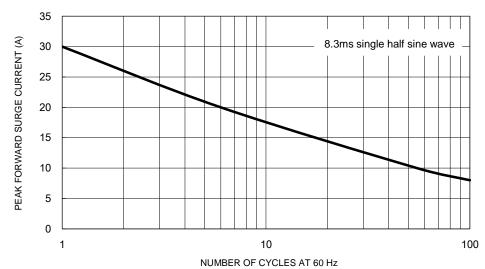


Fig.5 Maximum Non-Repetitive Forward Surge Current



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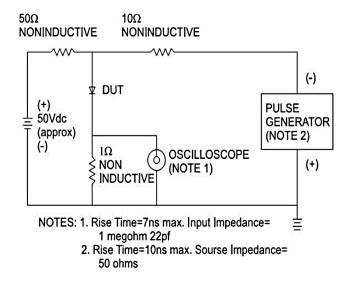


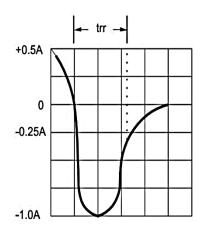
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### **CHARACTERISTICS CURVES**

 $(T_A = 25^{\circ}C \text{ unless otherwise noted})$ 

Fig.6 Reverse Recovery Time Characteristic and Test Circuit Diagram

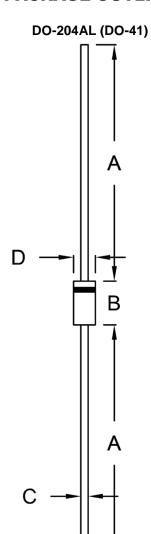








## **PACKAGE OUTLINE DIMENSIONS**



DIM.	Unit (mm)		Unit (inch)		
Dilvi.	Min.	Max.	Min.	Max.	
Α	25.40	-	1.000	-	
В	4.20	5.20	0.165	0.205	
С	0.71	0.86	0.028	0.034	
D	2.00	2.70	0.079	0.106	

## **MARKING DIAGRAM**



= Marking Code P/N G = Green Compound

YWW = Date Code = Factory Code F



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