Pb Free Plating Product

SFF10L04GD/SFF10L05GD/SFF10L06GD/SFF10L08GD

10.0 Ampere Insulated Dual Doubler Polarity Super Fast Recovery Rectifiers

Features

- ✶ Super fast switching for high efficiency
- ✶ Low forward voltage drop
- ✶ High current capability
- ✶ Low reverse leakage current
- ✶ High surge current capability

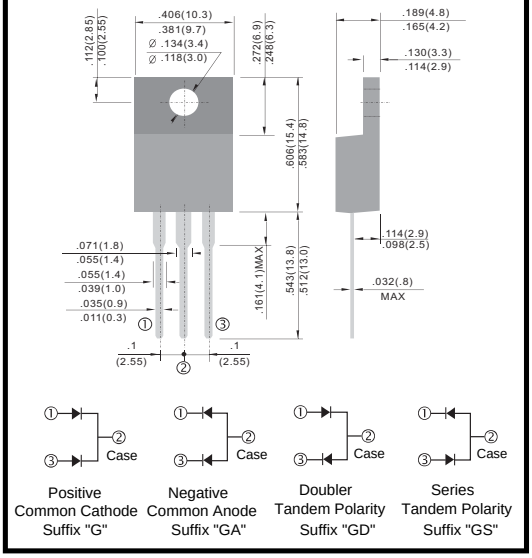
Application

- ✶ Automotive Inverters and Solar Inverters
- ✶ Plating Power Supply,SMPS and UPS
- ✶ Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- ✶ Case: ITO-220AB full plastic isolated package
- ✶ Epoxy: UL 94V-0 rate flame retardant
- ✶ Terminals: Solderable per MIL-STD-202 method 208
- ✶ Polarity: As marked on diode body
- ✶ Mounting position: Any
- ✶ Weight: 1.85 gram approximately

ITO-220AB Unit : inch (mm)



ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

PARAMETER		SYMBOL	SFF10L04GD	SFF10L05GD	SFF10L06GD	SFF10L08GD	UNIT
Marking code on the device			SFF10L04GD	SFF10L05GD	SFF10L06GD	SFF10L08GD	
Repetitive peak reverse voltage		V_{RRM}	200	300	400	600	V
Reverse voltage, total rms value		$V_{R(RMS)}$	140	280	280	420	V
Forward current	Per device	$I_{F(AV)}$	10				A
	Per diode		5				
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode		I_{FSM}	125		80		A
Junction temperature		T_J	- 55 to +150				°C
Storage temperature		T_{STG}	- 55 to +150				°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-lead thermal resistance	$R_{\Theta JL}$	2	°C/W
Junction-to-ambient thermal resistance	$R_{\Theta JA}$	9	°C/W
Junction-to-case thermal resistance	$R_{\Theta JC}$	3	°C/W

Thermal Performance Note: Units mounted on recommended PCB (2"x3"x0.25" Al -plate)

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)						
PARAMETER		**CONDITIONS**	**SYMBOL**	**TYP**	**MAX**	**UNIT**
Forward voltage per diode [1]	SFF10L04GD	I_F = 5A, T_J = 25°C	V_F	0.94	0.98	V
		I_F = 5A, T_J = 125°C		0.82	0.90	V
	SFF10L05GD	I_F = 5A, T_J = 25°C		1.04	1.30	V
		I_F = 5A, T_J = 125°C		0.89	0.96	V
	SFF10L06GD	I_F = 5A, T_J = 25°C		1.05	1.30	V
		I_F = 5A, T_J = 125°C		0.92	1.00	V
	SFF10L08GD	I_F = 5A, T_J = 25°C		1.21	1.70	V
		I_F = 5A, T_J = 125°C		1.04	1.20	V
Reverse current @ rated V_R per diode [2]		T_J = 25°C	I_R	-	10	μA
		T_J = 125°C		-	400	μA
Junction capacitance	SFF10L04GD	1 MHz, V_R=4.0V	C_J	60	-	pF
	SFF10L05GD			50	-	pF
	SFF10L06GD					pF
	SFF10L08GD					pF
Reverse recovery time	SFF10L04GD	I_F=0.5A , I_R=1.0A I_{RR}=0.25A	t_{rr}	-	35	ns
	SFF10L05GD					
	SFF10L06GD					
	SFF10L08GD					

Notes:

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

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig1. Forward Current Derating Curve

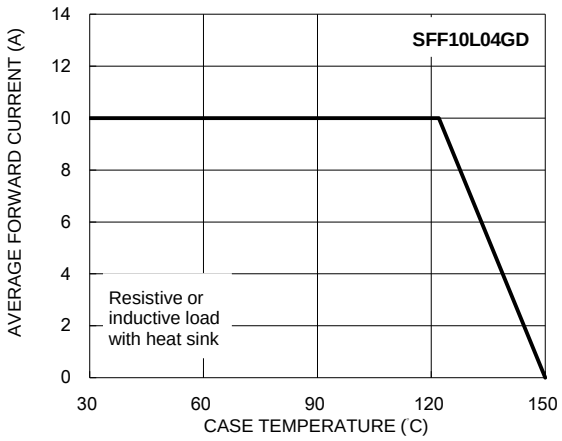


Fig2. Typical Junction Capacitance

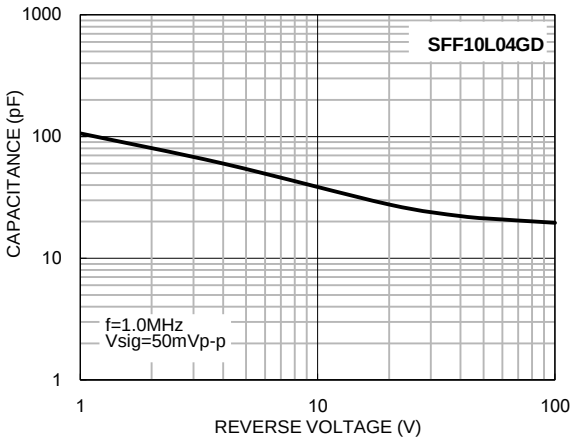


Fig3. Typical Reverse Characteristics

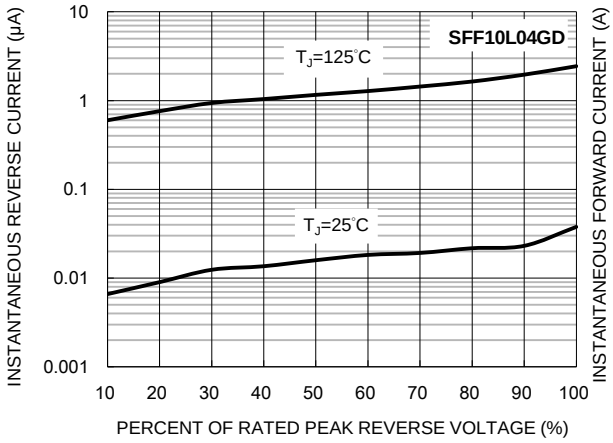
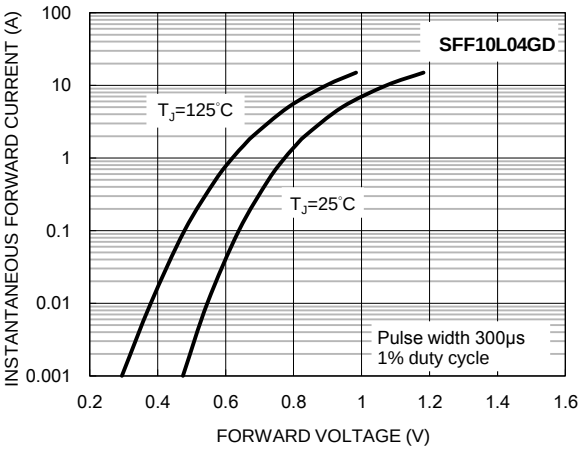


Fig4. Typical Forward Characteristics



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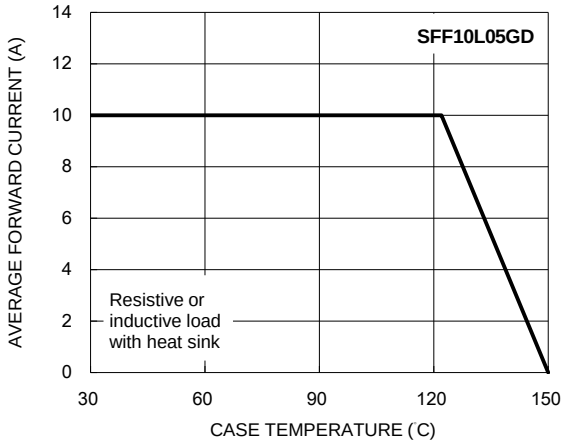

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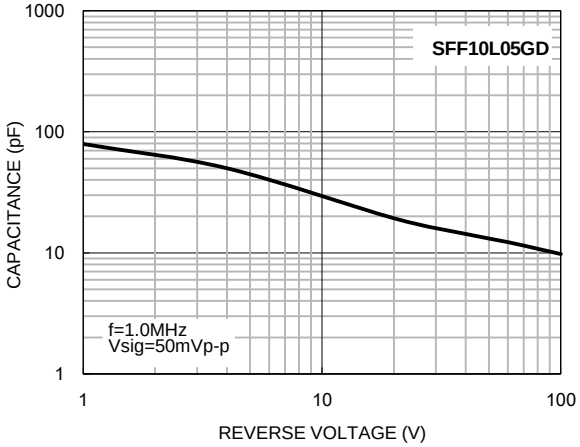


Fig3. Typical Reverse Characteristics

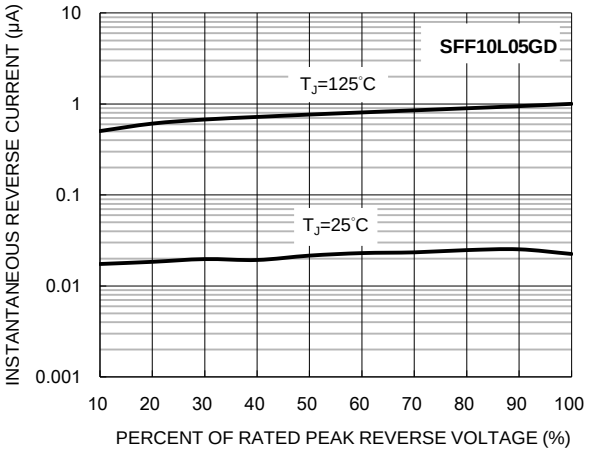
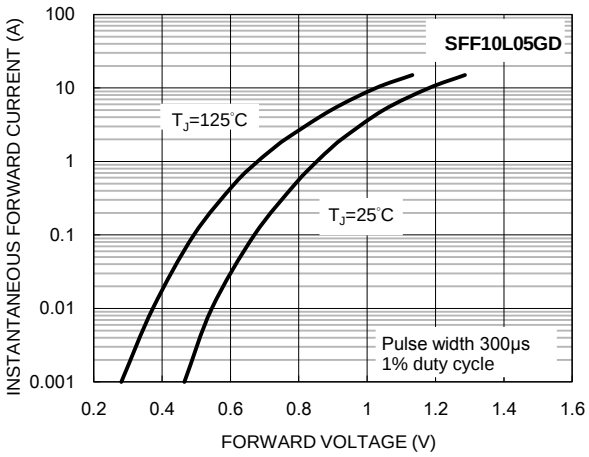


Fig4. Typical Forward Characteristics



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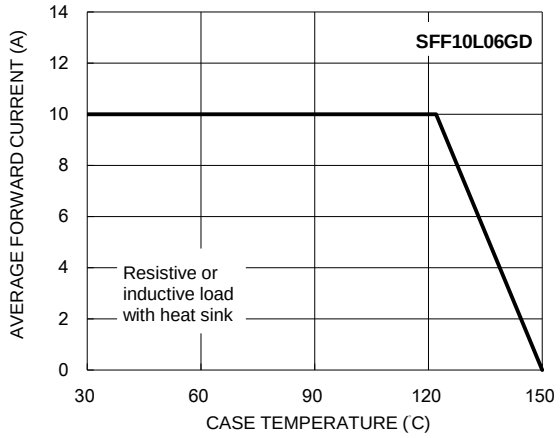

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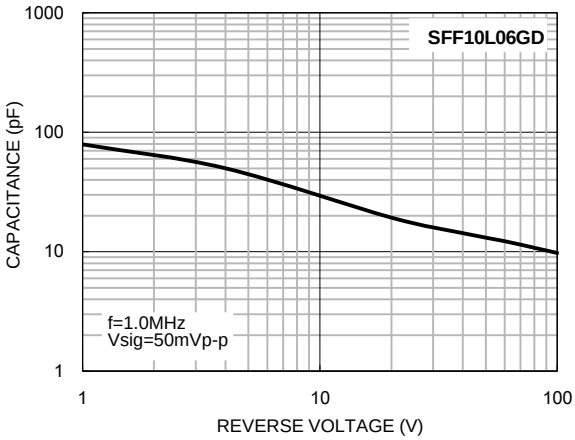

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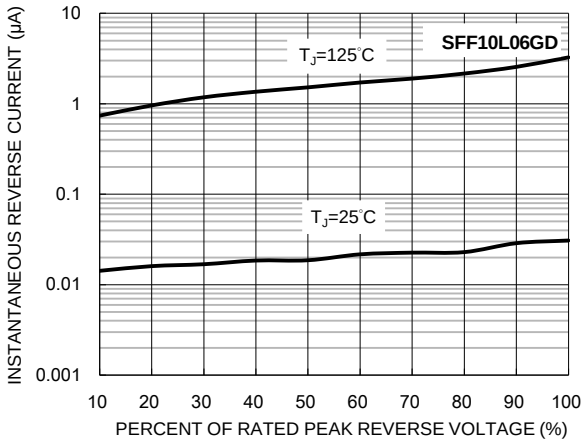

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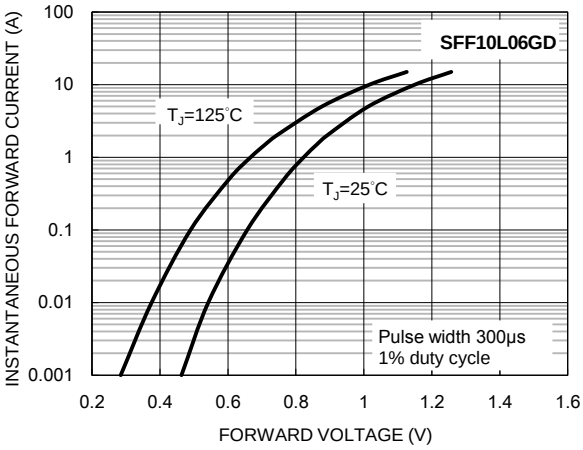

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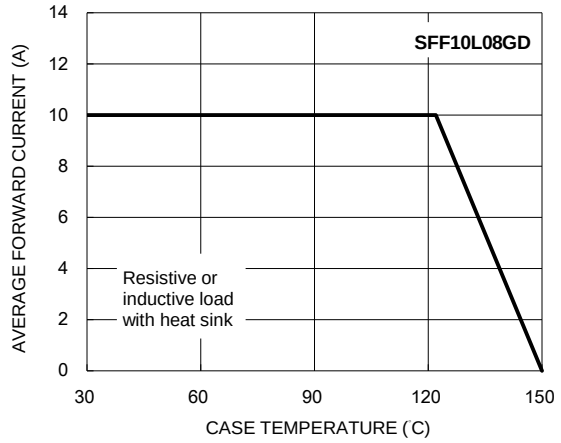

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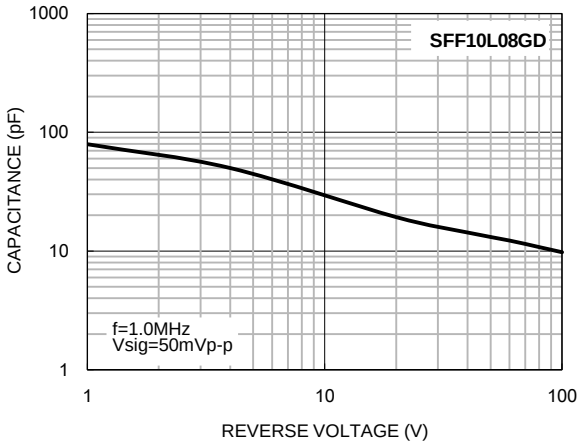

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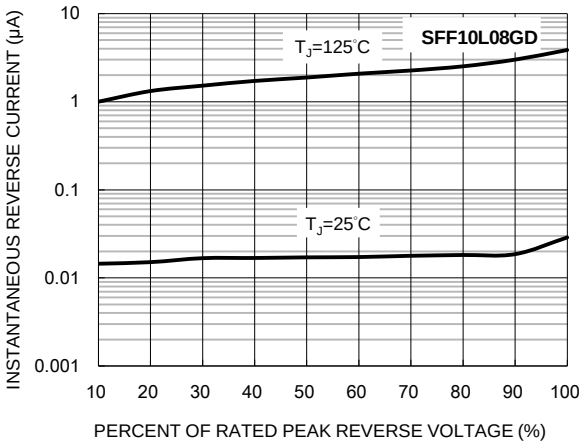

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