

Pb Free Plating Product

SFF10L04GA/SFF10L05GA/SFF10L06GA/SFF10L08GA



10.0 Ampere Insulated Dual Common Anode 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

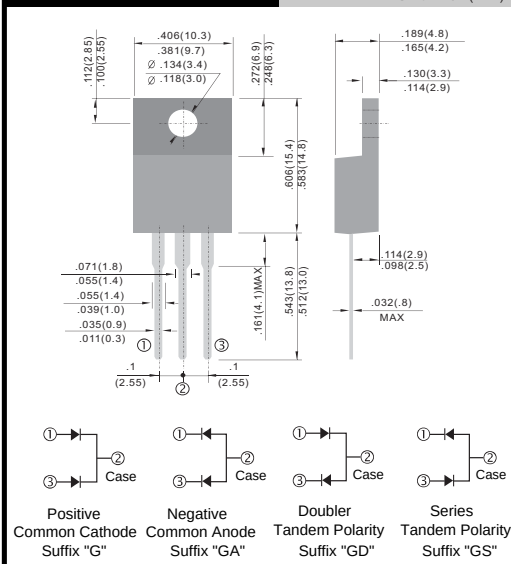
- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

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

PARAMETER		SYMBOL	SFF10L04GA	SFF10L05GA	SFF10L06GA	SFF10L08GA	UNIT
Marking code on the device			SFF10L04GA	SFF10L05GA	SFF10L06GA	SFF10L08GA	
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	$^\circ\text{C/W}$
Junction-to-ambient thermal resistance	$R_{\theta JA}$	9	$^\circ\text{C/W}$
Junction-to-case thermal resistance	$R_{\theta JC}$	3	$^\circ\text{C/W}$

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

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

PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	SFF10L04GA	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
	SFF10L05GA	I _F = 5A, T _J = 25°C		1.04	1.30	V
		I _F = 5A, T _J = 125°C		0.89	0.96	V
	SFF10L06GA	I _F = 5A, T _J = 25°C		1.05	1.30	V
		I _F = 5A, T _J = 125°C		0.92	1.00	V
	SFF10L08GA	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	SFF10L04GA	1 MHz, V _R =4.0V	C _J	60	-	pF
	SFF10L05GA			50	-	pF
	SFF10L06GA					pF
	SFF10L08GA					pF
Reverse recovery time	SFF10L04GA	I _F =0.5A , I _R =1.0A I _{RR} =0.25A	t _{rr}	-	35	ns
	SFF10L05GA					
	SFF10L06GA					
	SFF10L08GA					

Notes:

1. Pulse test with $PW = 0.3\text{ ms}$
2. Pulse test with $PW = 30\text{ ms}$

CHARACTERISTICS CURVES

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

Fig1. Forward Current Derating Curve

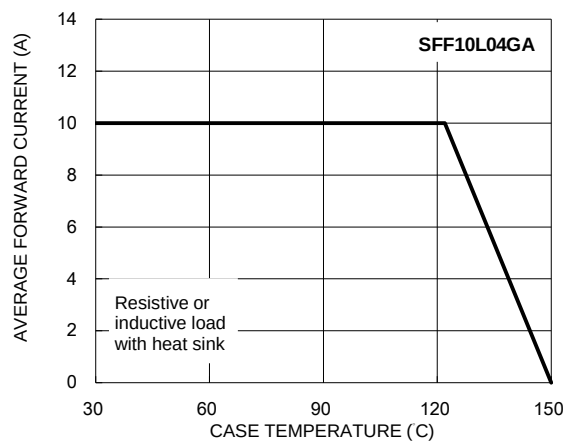


Fig2. Typical Junction Capacitance

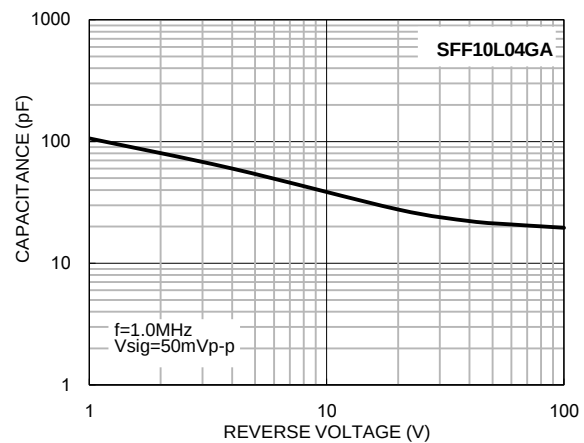


Fig3. Typical Reverse Characteristics

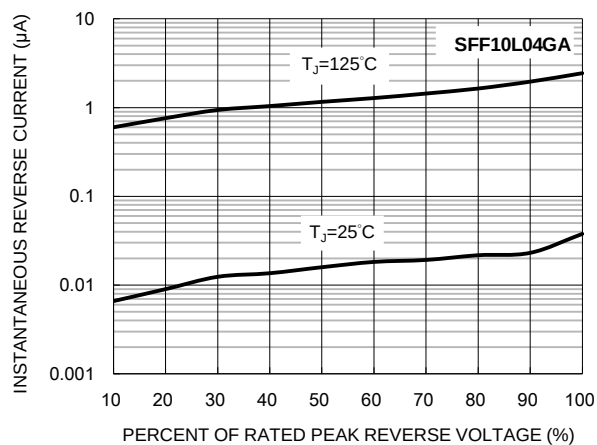
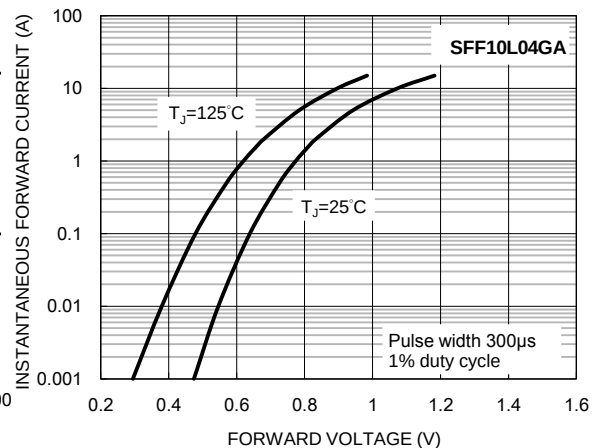


Fig4. Typical Forward Characteristics



CHARACTERISTICS CURVES

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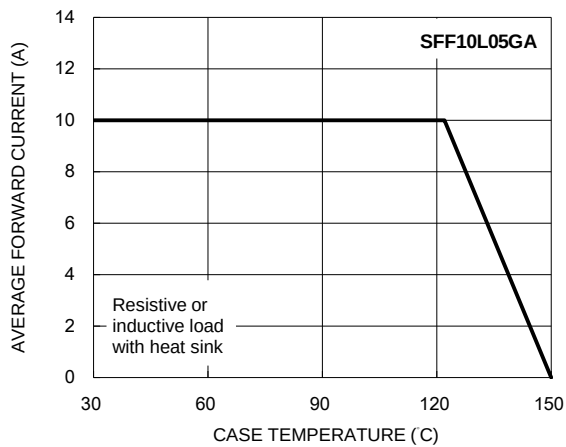


Fig2. Typical Junction Capacitance

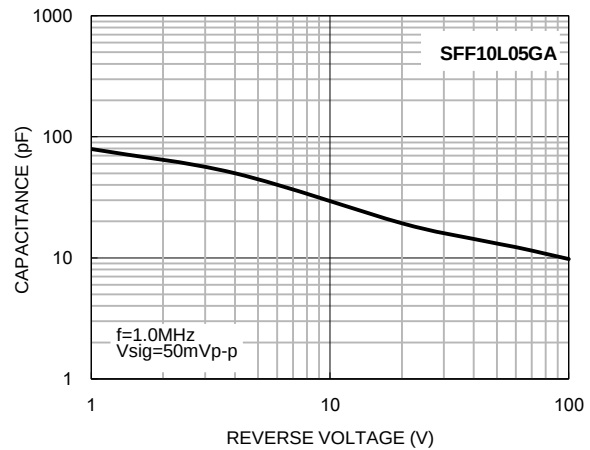


Fig3. Typical Reverse Characteristics

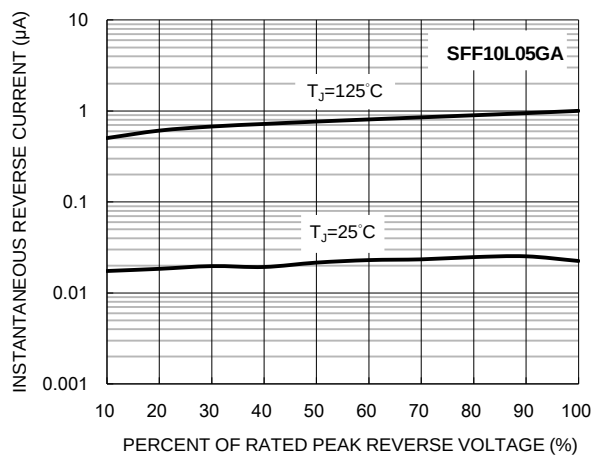
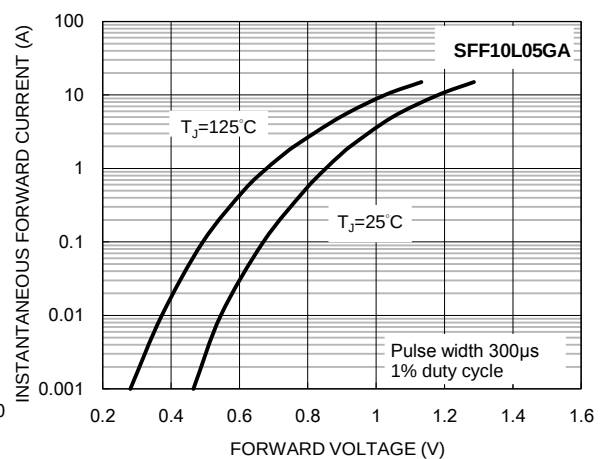


Fig4. Typical Forward Characteristics



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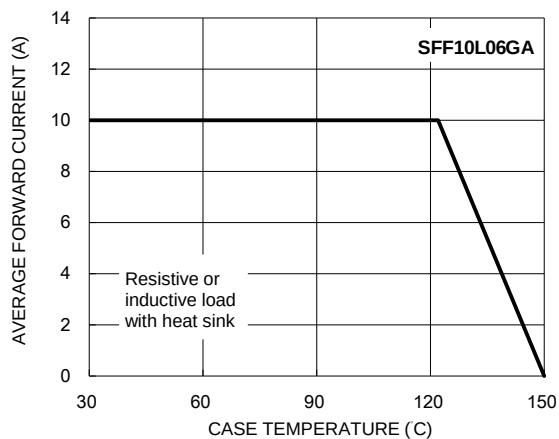


Fig2. Typical Junction Capacitance

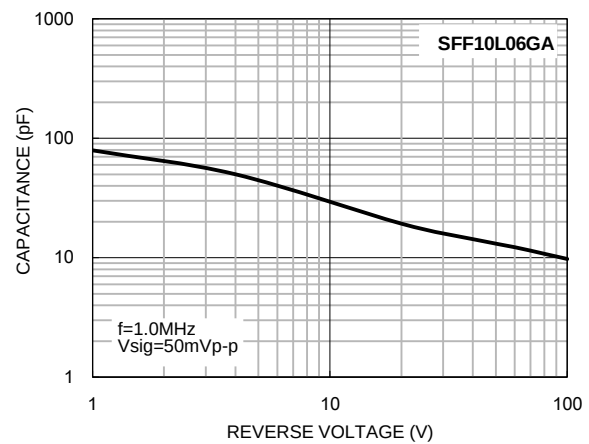


Fig3. Typical Reverse Characteristics

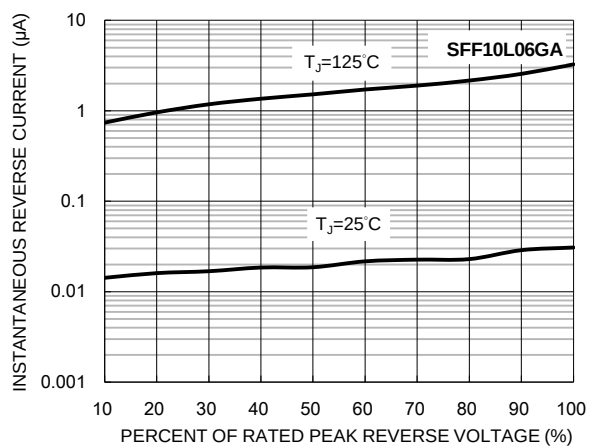
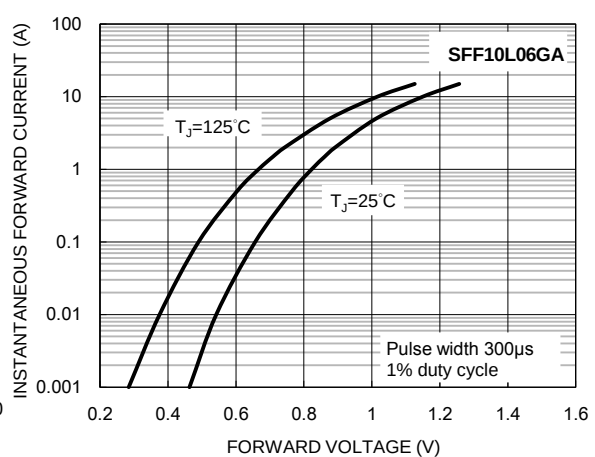


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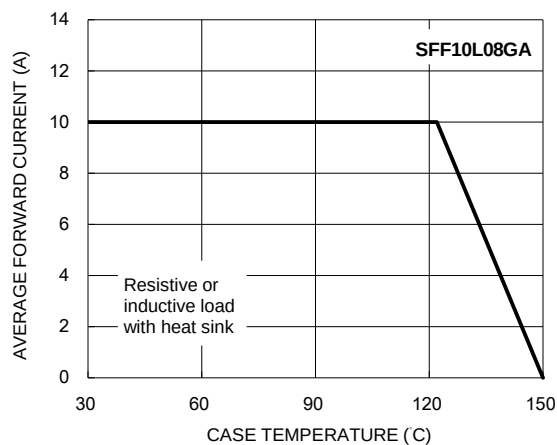


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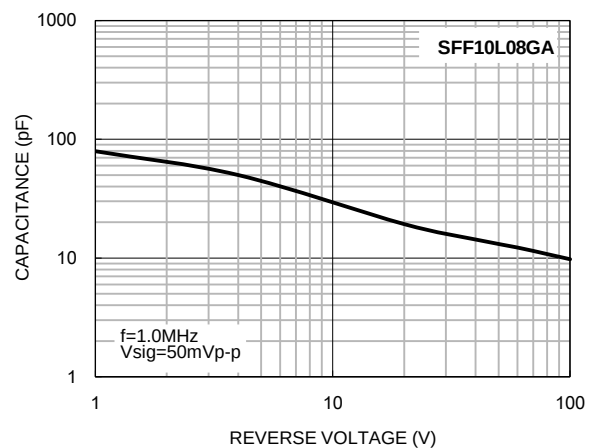


Fig3. Typical Reverse Characteristics

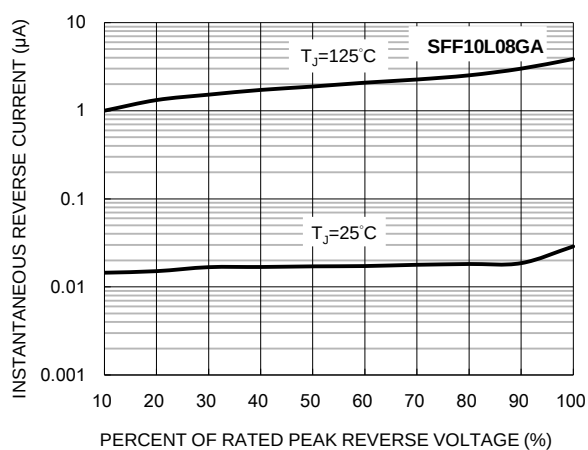


Fig4. Typical Forward Characteristics

