

### Features

- ✧ UL Recognized File # E-326243
- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ For use in low voltage, high frequency inverter, Free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



### Mechanical Data

- ✧ Case: ITO-220AB Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering: 260°C/10 seconds/.25", (6.35mm) from case
- ✧ Weight: 1.7 grams
- ✧ Mounting torque: 5 in - lbs. max.

### Ordering Information (example)

Part No.	Package	Packing	Packing code	Green Compound Packing code
SFF1601G	ITO-220AB	50 / TUBE	D0	D0G

### Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	SFF 1601G	SFF 1602G	SFF 1603G	SFF 1604G	SFF 1605G	SFF 1606G	SFF 1607G	SFF 1608G	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	16								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	125								A
Maximum Instantaneous Forward Voltage (Note 1) @ 8A	$V_F$	0.975			1.3		1.7			V
Maximum Reverse Current @ Rated VR $T_A=25\text{ }^\circ\text{C}$ $T_A=100\text{ }^\circ\text{C}$	$I_R$	10				400				uA
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	35								nS
Typical Junction Capacitance (Note 3)	$C_j$	80				60				pF
Typical Thermal Resistance	$R_{\theta JC}$	1.5								$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	- 65 to + 150								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150								$^\circ\text{C}$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SFF1601G THRU SFF1608G)

FIG.1 FORWARD CURRENT DERATING CURVE

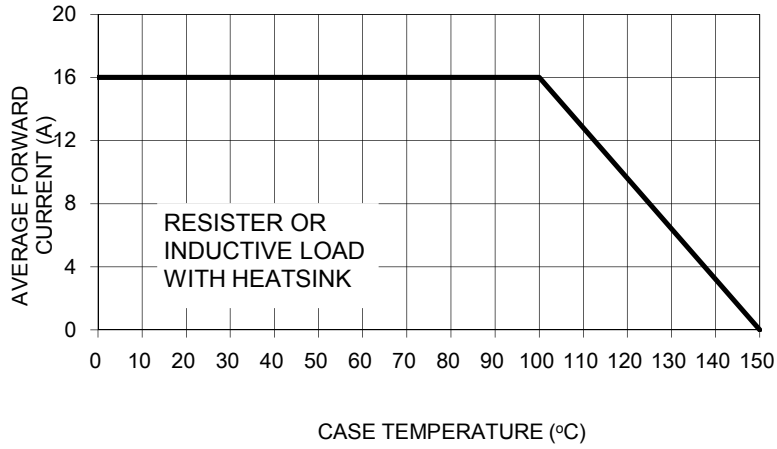


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

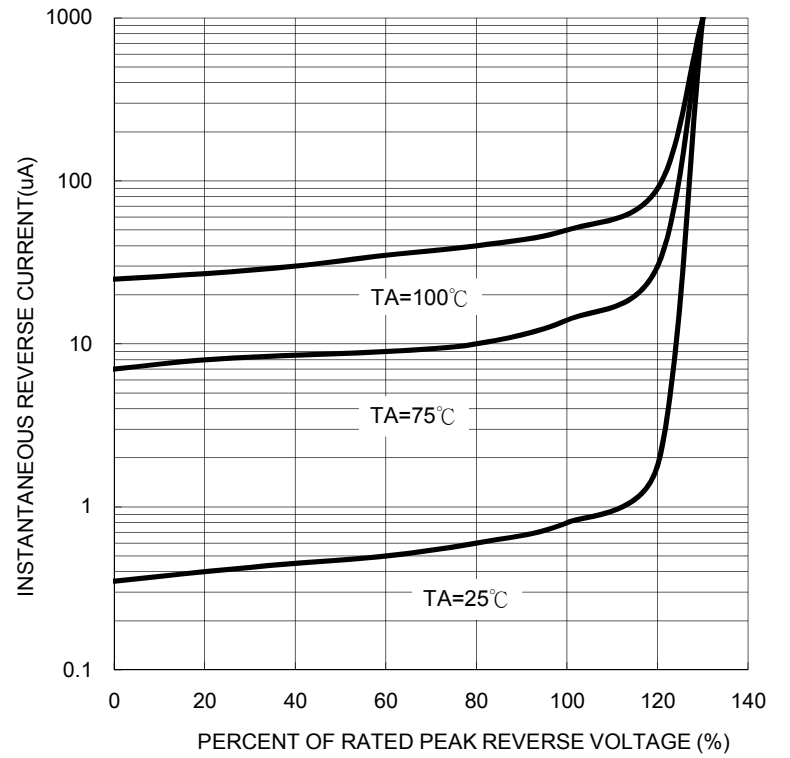


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

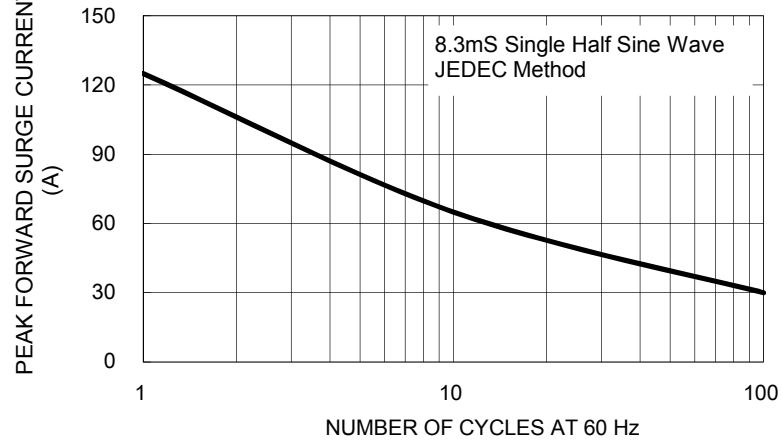


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

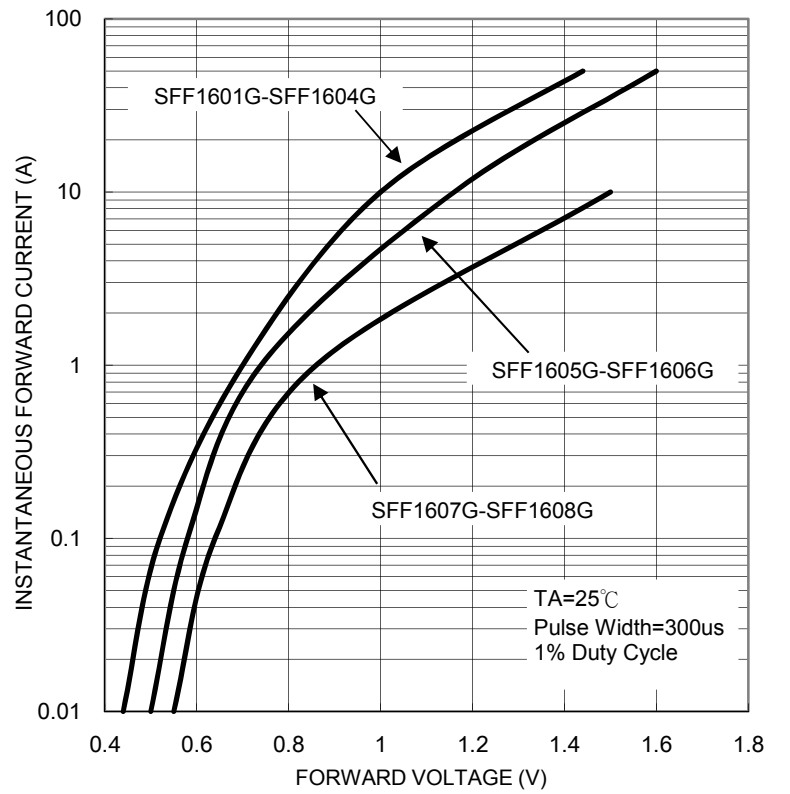


FIG. 4 TYPICAL JUNCTION CAPACITANCE

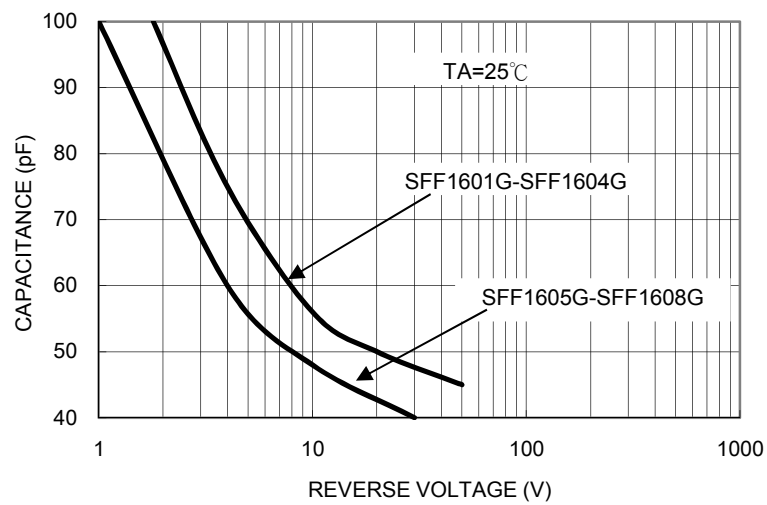
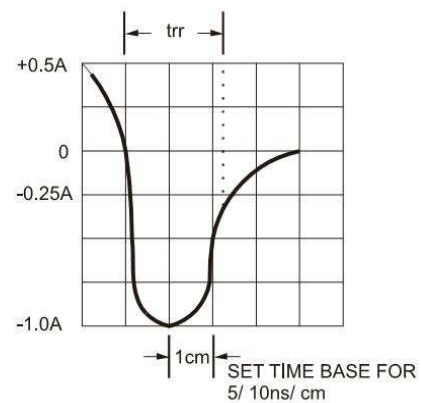
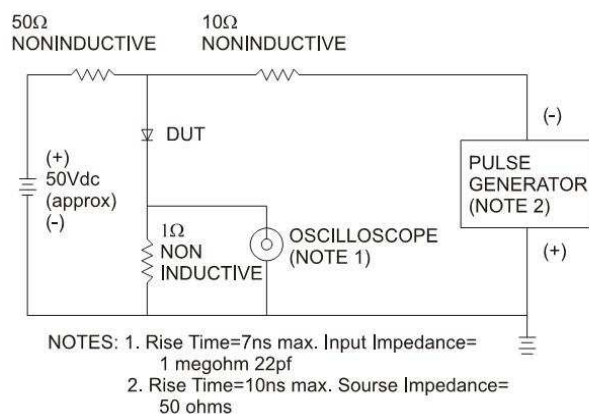


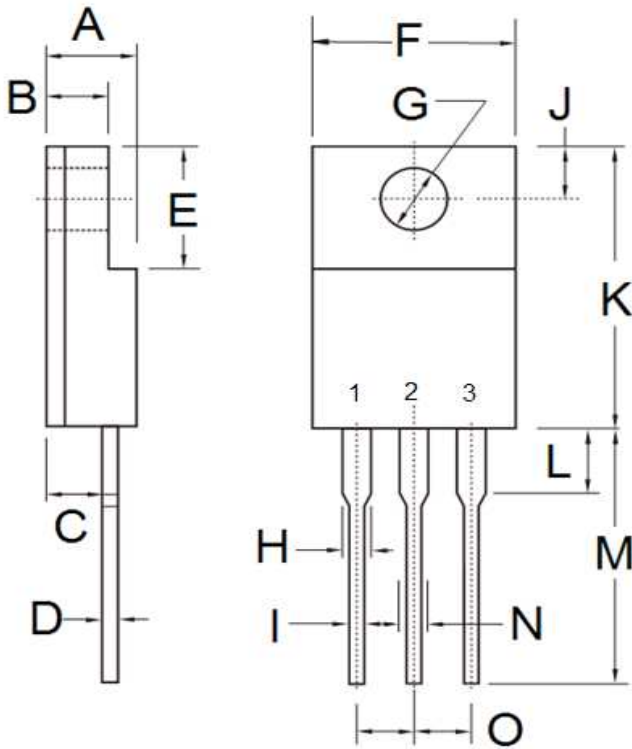
FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



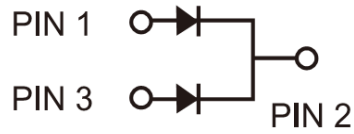
**Ordering information**

Part No.	Package	BULK Packing	Packing code	Green Compound Packing code
SFF160xG	ITO-220AB	50 / TUBE	C0	C0G
	ITO-220AB	50 / TUBE	D0	D0G

Note: "x" is Device Code from "1" thru "8".

**Dimensions**


DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	4.30	4.70	0.169	0.185
B	2.50	3.16	0.098	0.124
C	2.30	2.96	0.091	0.117
D	0.46	0.76	0.018	0.030
E	6.30	6.90	0.248	0.272
F	9.60	10.30	0.378	0.406
G	3.00	3.40	0.118	0.134
H	0.95	1.45	0.037	0.057
I	0.50	0.90	0.020	0.035
J	2.40	3.20	0.094	0.126
K	14.80	15.50	0.583	0.610
L	-	4.10	-	0.161
M	12.60	13.80	0.496	0.543
N	-	1.80	-	0.071
O	2.41	2.67	0.095	0.105


**Marking Diagram**


P/N = Specific Device Code  
 G = Green Compound  
 YWW = Date Code