

RoHS Compliant Product
 A suffix of "-C" specifies and halogen free

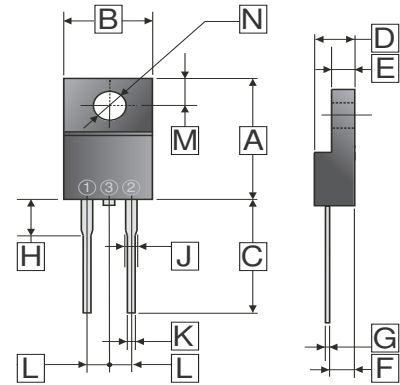
FEATURES

- Fast switching for high efficiency
- Low forward voltage drop
- High current capability
- Low reverse leakage current
- High surge current capability

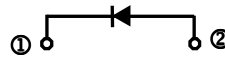
MECHANICAL DATA

- Case : Molded plastic ITO-220A
- Epoxy : UL 94V-0 rate flame retardant
- Terminals : Solderable per MIL-STD-202 method 208
- Polarity : Color band denotes cathode
- Mounting position : Any
- Weight : 1.73 grams

ITO-220A



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	14.70	15.30	H	3.50	3.90
B	9.50	10.50	J	1.10	1.50
C	13.00	-	K	0.50	0.90
D	4.30	4.70	L	2.44	2.64
E	2.50	3.10	M	2.50	2.90
F	2.40	2.80	N	φ 3.1	φ 3.4
G	0.30	0.70			



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, de-rate current by 20%.)

Parameters	Symbol	Part Number			Unit
		SFG08E200F	SFG08E400F	SFG08E600F	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current $T_C=100^\circ C$	$I_{F(AV)}$	8.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	125			A
Maximum Instantaneous Forward Voltage @ 8.0A	V_F	0.95	1.25	2.4	V
Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_J=25^\circ C$	10			μA
	$T_J=125^\circ C$	250			
Maximum Reverse Recovery Time ¹	T_{RR}	25			nS
Typical Junction Capacitance ²	C_J	85		50	pF
Typical Thermal Resistance ³	$R_{\theta JC}$	5.0			°C W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~150			°C

Notes :

1. Reverse recovery test conditions $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.
3. Thermal Resistance junction to case.

RATINGS AND CHARACTERISTICS CURVE

FIG.1 - FORWARD CURRENT DERATING CURVE

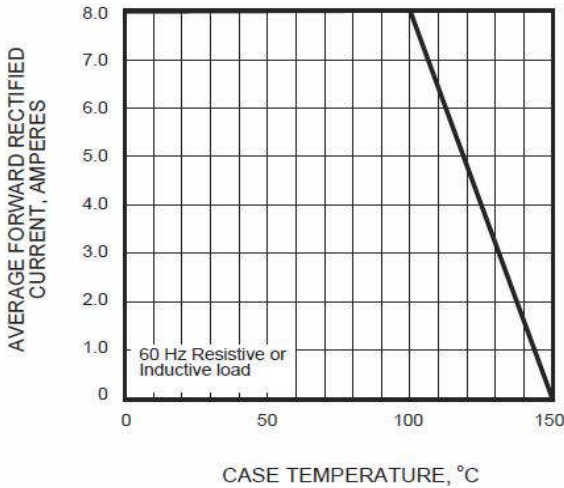


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

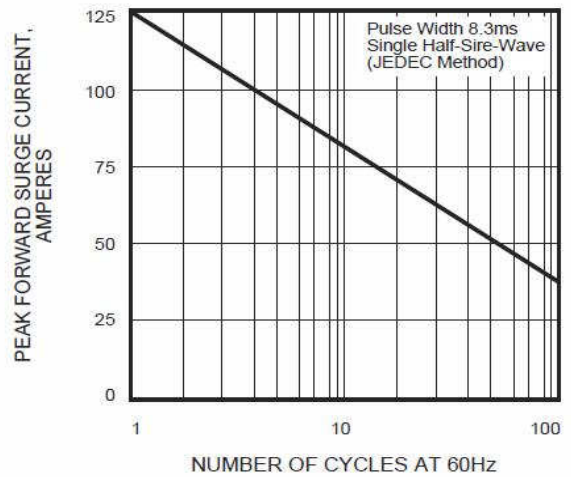


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

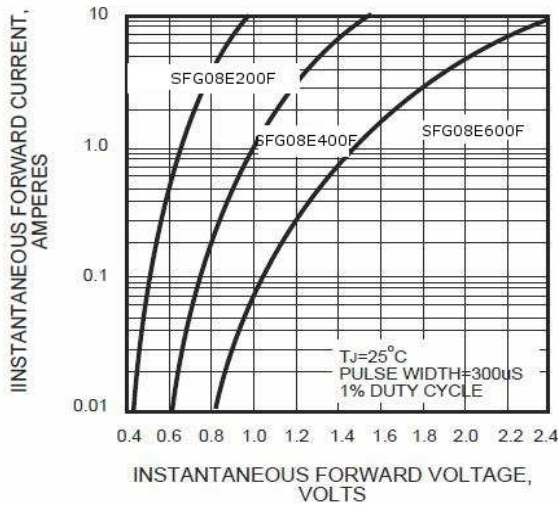


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

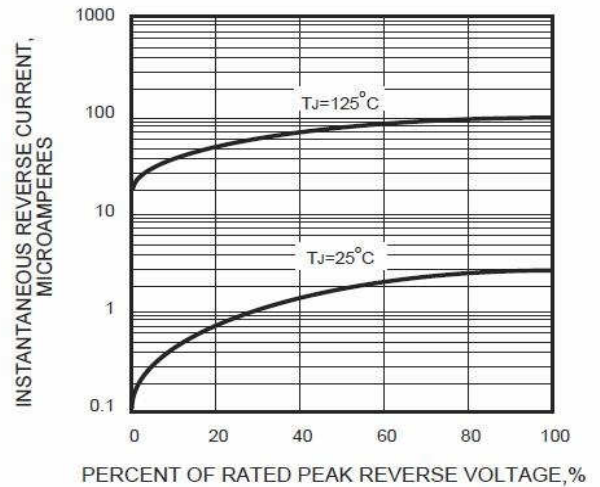
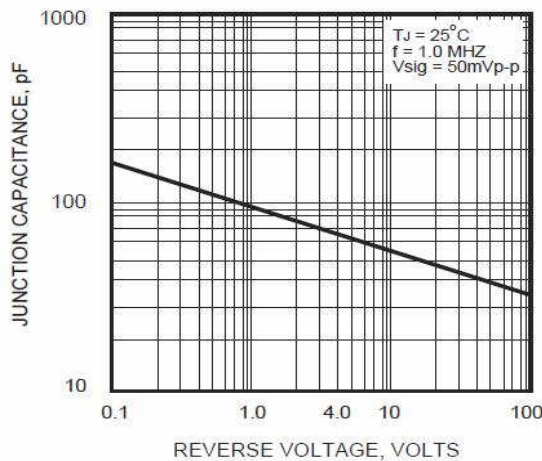


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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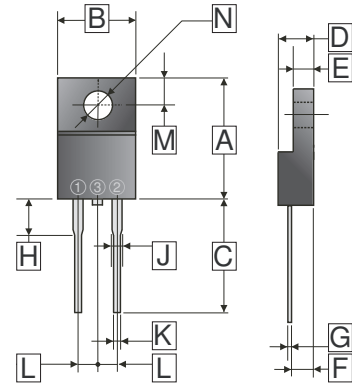
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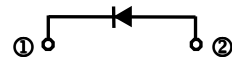
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Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200	175		A
Maximum Instantaneous Forward Voltage @ 10A	V_F	0.95	1.3	1.7	V
Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$	I_R	10		μA
	$T_J=125^\circ\text{C}$		250		
Maximum Reverse Recovery Time ¹	T_{RR}	35			nS
Typical Junction Capacitance ²	C_J	65			pF
Typical Thermal Resistance ³	$R_{\theta JC}$	2.2			$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~150			$^\circ\text{C}$

Notes :

1. Reverse recovery test conditions $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.
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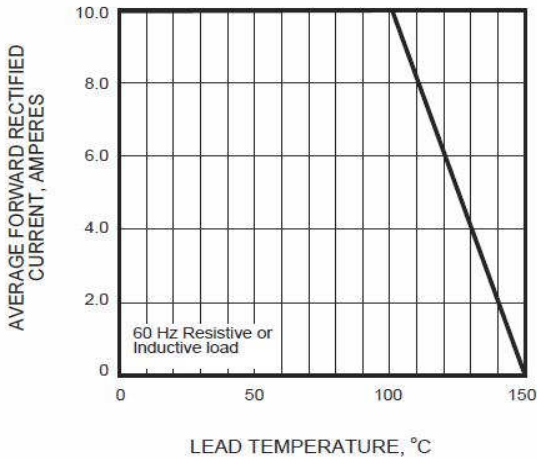


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

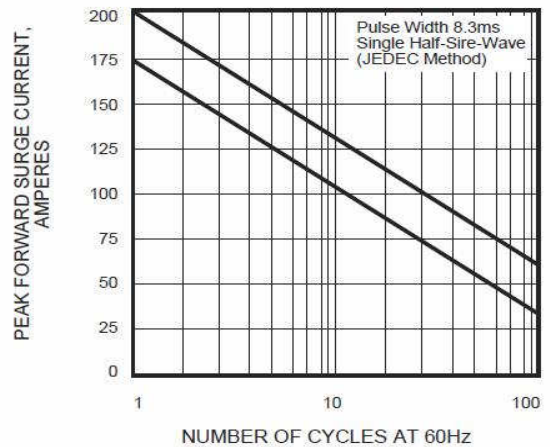


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

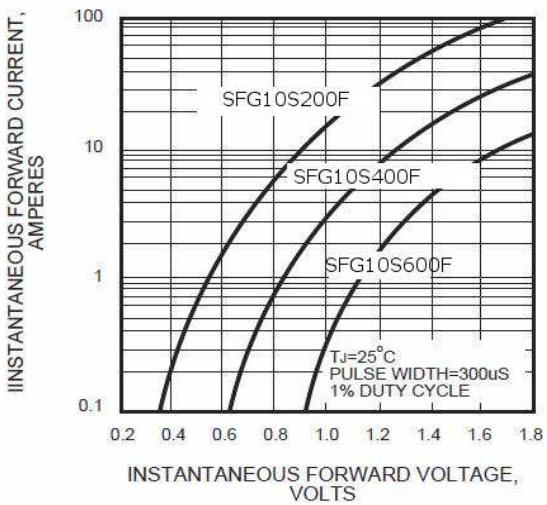


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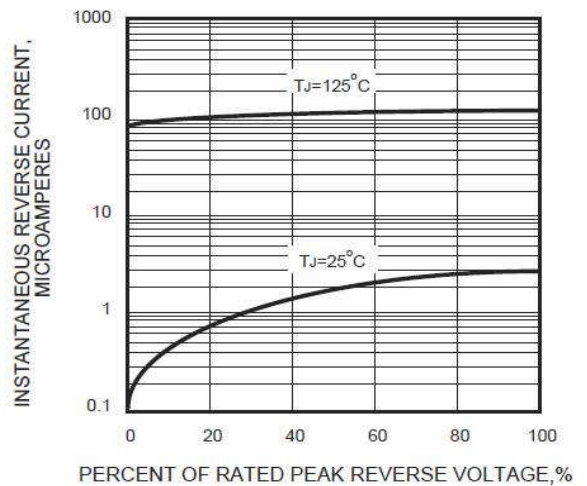


FIG.5 - TYPICAL JUNCTION CAPACITANCE

