- Low forward voltage, high current capability
- Low thermal resistance
- Low power loss, high efficiency
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

TO-247AD (TO-3P)

MECHANICAL DATA

Case: TO-247AD (TO-3P)

Molding compound, UL flammability classification rating 94V-0

Base P/N with suffix "G" on packing code - halogen-free

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Polarity: As marked

Mounting torque: 10 in-lbs maximum

Weight: 5.6g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)

PARAMETER	SYMBOL	SF 3001 PT	SF 3002 PT	SF 3003 PT	SF 3004 PT	SF 3005 PT	SF 3006 PT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400
Maximum average forward rectified current	$I_{F(AV)}$	30					
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	300					
Maximum instantaneous forward voltage (Note 1) I_F= 15 A	V_F	0.95				1.3	
Maximum reverse current @ rated VR T_J=25 ℃	I_R	10					
T_J=125 ℃		500					
Maximum reverse recovery time (Note 2)	Trr	35					
Typical junction capacitance (Note 3)	Cj	175					
Typical thermal resistance	$R_{\theta JC}$	1.0					
Operating junction temperature range	T_J	- 55 to +150					
Storage temperature range	T_{STG}	- 55 to +150					

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

Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, Recover to 0.25A.

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

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EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTIO
SF3006PT C0	SF3006PT	C0		
SF3006PT C0G	SF3006PT	C0	G	Green compou

RATINGS AND CHARACTERISTICS CURVES

(TA=25℃ unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

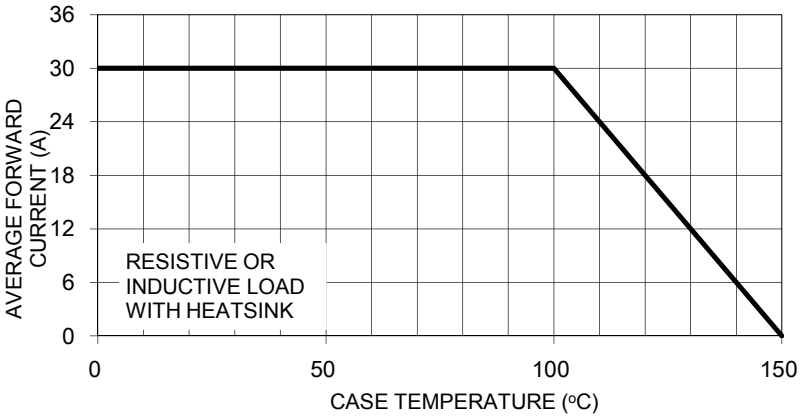


FIG. 2- TYPICAL REVERSE CHARACT

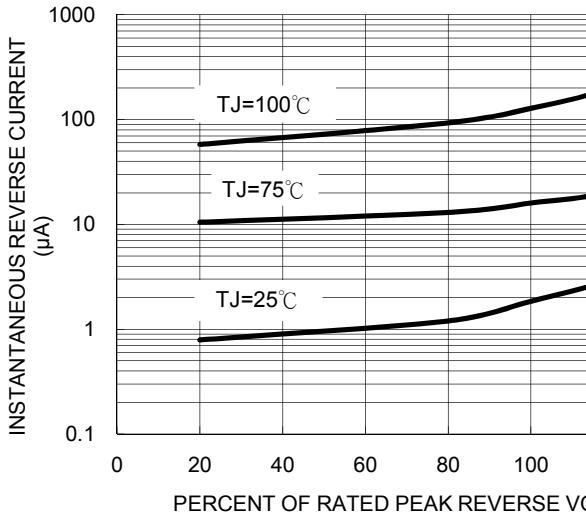


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

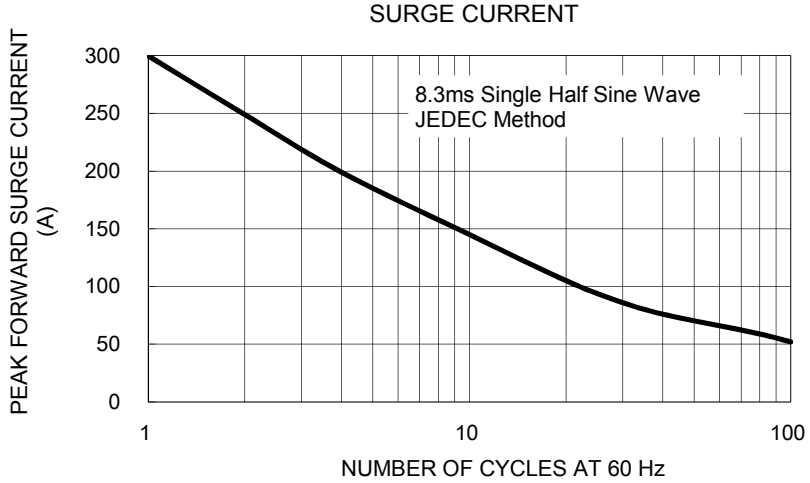
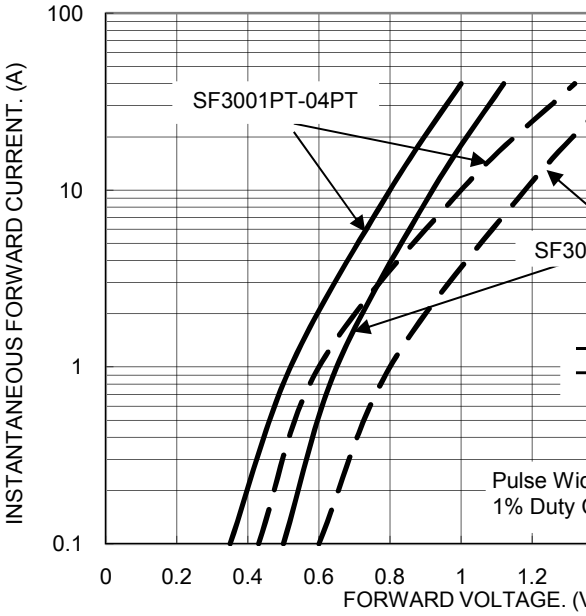
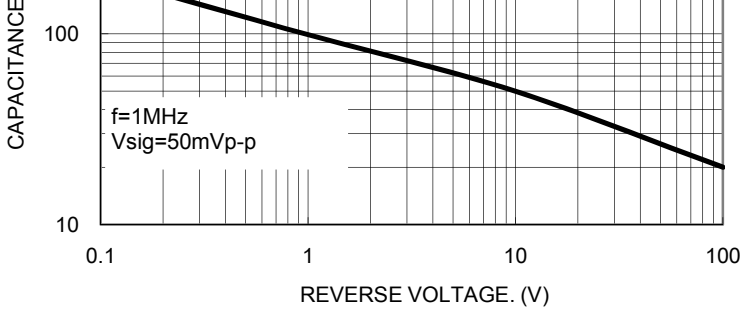
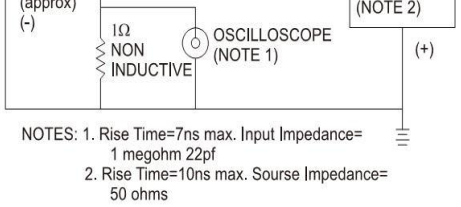
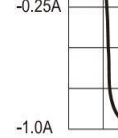


FIG. 4- TYPICAL INSTANEOUS FO CHARACTERISTICS

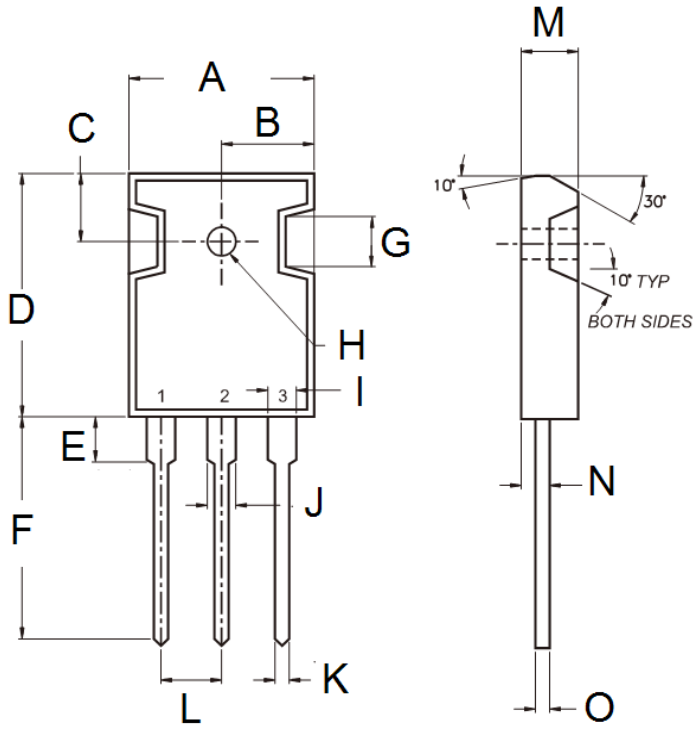








PACKAGE OUTLINE DIMENSIONS



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	15.90	16.40	0.626	0.646
B	7.90	8.20	0.311	0.323
C	5.70	6.20	0.224	0.244
D	20.80	21.30	0.819	0.839
E	3.50	4.10	0.138	0.161
F	19.70	20.20	0.776	0.795
G	-	4.30	-	0.169
H	2.90	3.40	0.114	0.134
I	1.93	2.18	0.076	0.086
J	2.97	3.22	0.117	0.127
K	1.12	1.22	0.044	0.048
L	5.20	5.70	0.205	0.224
M	4.90	5.16	0.193	0.203
N	2.70	3.00	0.106	0.118
O	0.51	0.76	0.020	0.030

MARKING DIAGRAM

P/N = Marking Code
G = Green Compound
YWW = Date Code
F = Factory Code

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