



# SF31G~SF38G

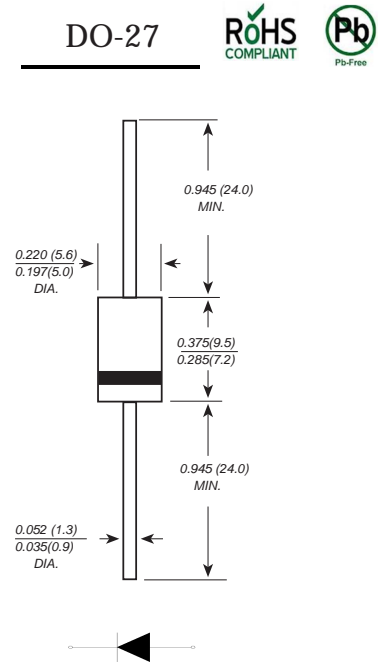
## 3.0Amp Super Fast Rectifiers

### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed  
250°C/10 seconds at terminals

### Mechanical Data

Case : Molded plastic body  
 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity : Polarity symbol marking on body  
 Mounting Position : Any  
 Weight : 0.0345 ounce, 0.98 grams



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF37G	SF38G	UNITS
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 at $T_L=100^\circ\text{C}$	$I_{(AV)}$	3.0								A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150.0								A
Maximum instantaneous forward voltage at 3.0A	$V_F$	0.95				1.25		1.7		V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$					5.0		500		$\mu\text{A}$
Maximum reverse recovery time(Note 1)	$T_{rr}$					35				ns
Typical junction capacitance (Note2)	$C_J$					75.0				pF
Typical thermal resistance	$R_{qJA}$					45.0				$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$					-55 to +150				$^\circ\text{C}$

Note: 1.Reverse recovery time test condition:  $I_F=0.5A$   $I_R=1.0A$   $I_{rr}=0.25A$   
 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.



## Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

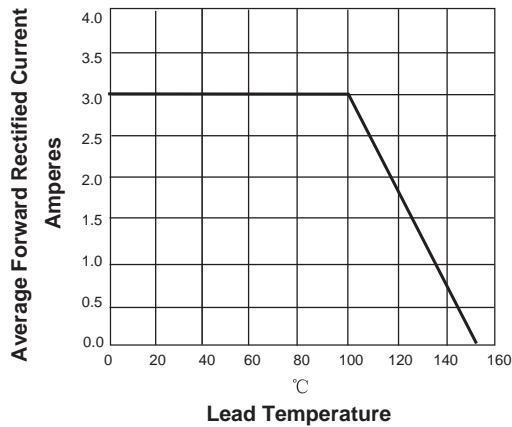


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

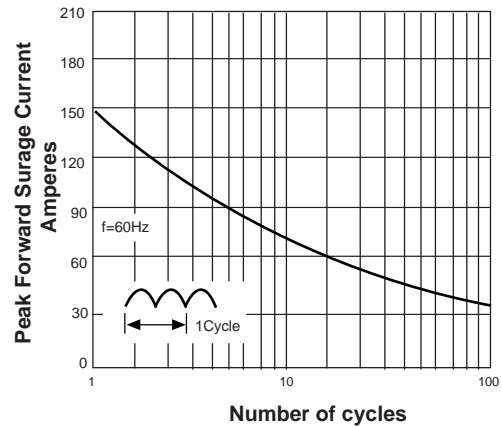


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

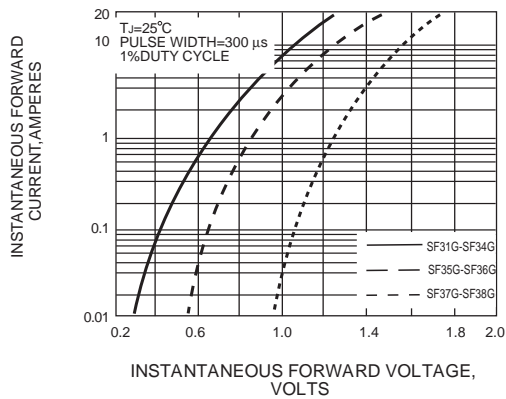
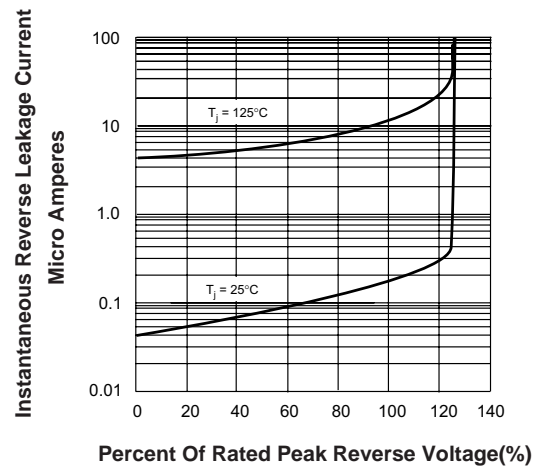
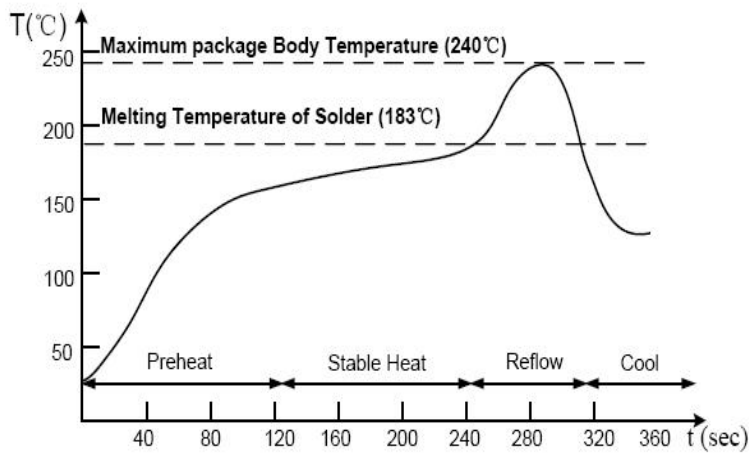


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



### Suggested Soldering Temperature Profile

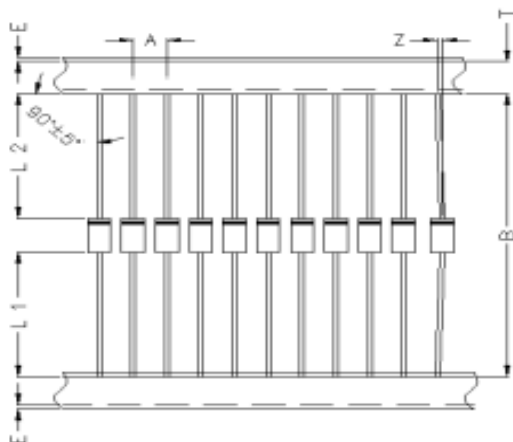


#### Note

- ◆ Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- ◆ The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- ◆ Devices can be cleaned using standard industry methods and solvents.
- ◆ If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

### Package Information

#### Taping Specifications



Item	Symbol	Specifications(mm)
Component Pitch	A	10.0±0.5
Inner Tape Pitch	B	52.4±1.5
Component alignment	Z	1.2 Max
Tape width	T	6.0±0.5
Exposed adhesive	E	0.8 Max
Body eccentricity	L1-L2	1.0 Max

#### Ammunition Package Specifications

Package	Inner Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
DO - 27	255*150*75	1.25	420*276*312	12.5