



SF18G

DIODE

GLASS PASSIVATED SUPER FAST RECOVERY RECTIFIER

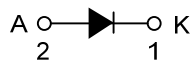
DESCRIPTION

The UTC **SF18G** is a glass passivated super fast rectifier, it uses UTC's advanced technology to provide customers with high surge current and low forward voltage drop, etc.

FEATURES

- * Low forward voltage drop
- * High surge current capability
- * High current capability
- * High reliability

SYMBOL



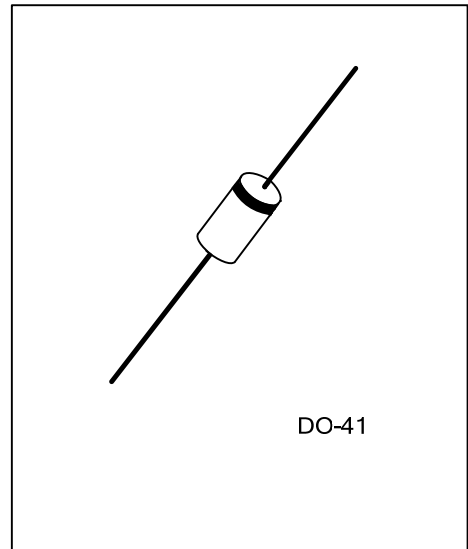
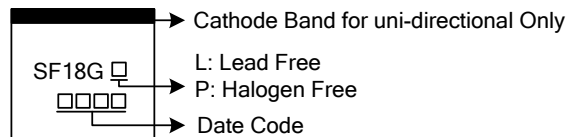
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
SF18GL-Z41-B	SF18GP-Z41-B	DO-41	K	A	Tape Box
SF18GL-Z41-R	SF18GP-Z41-R	DO-41	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

	(1) B: Tape Box, R: Tape Reel (2) Z41: DO-41 (3) L: Lead Free, P: Halogen Free and Lead Free
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MARKING



■ ABSOLUTE MAXIMUM RATINGS

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	SYMBOL	RATINGS	UNIT
Working Peak Reverse Voltage	V_{RWM}	600	V
Repetitive Peak Reverse Voltage	V_{RRM}	600	V
Maximum RMS Reverse Voltage	V_{RMS}	420	V
DC Blocking Voltage	V_R	600	V
Average Rectified Output Current ($T_A=55^\circ\text{C}$)	I_O	1.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30	A
Junction Temperature	T_J	-55~+150	°C
Storage Temperature	T_{STG}	-55~+150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient (Note 2)	θ_{JA}	50	°C/W

■ 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%.

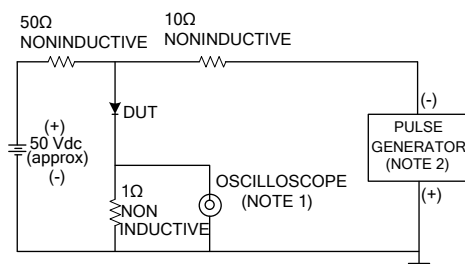
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage	V_{FM}	$I_F=1.0\text{A}$			1.7	V
DC Reverse Current at Rated DC Blocking Voltage	I_{RM}	$T_A=25^\circ\text{C}$			5.0	μA
		$T_A=100^\circ\text{C}$			100	μA
Reverse Recovery Time	t_{rr}	$I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$			35	ns
Junction Capacitance (Note 1)	C_J			25		pF

Notes: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

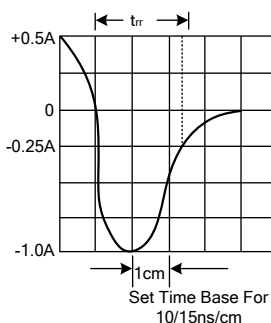
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted.

■ TYPICAL CHARACTERISTICS

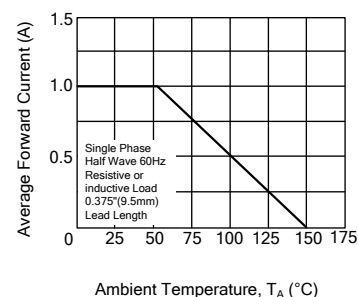
Test Circuit Diagram And Reverse Recovery Time Characteristics



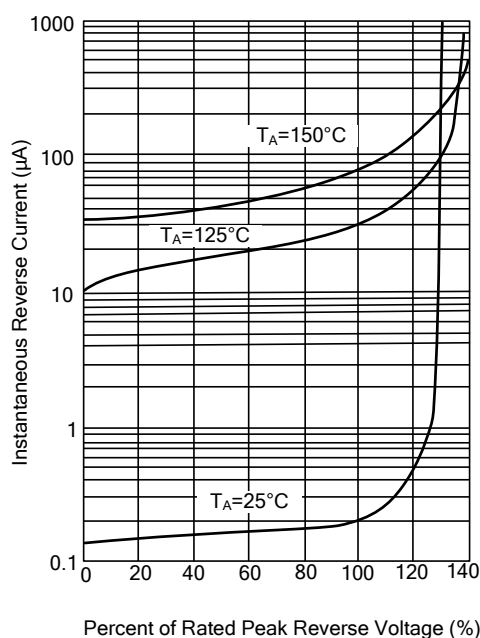
Notes: 1 Rise Time=7ns max. Input Impedance=1 megohm 22pF
2 Rise Time=10ns max. Source Impedance=50 ohms



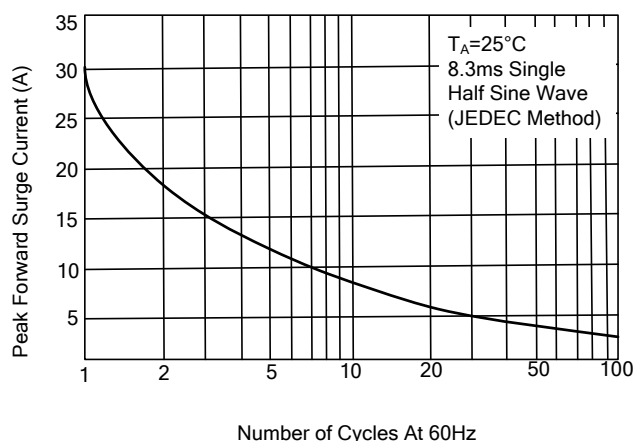
Typical Forward Current Derating Curve



Typical Reverse Characteristics



Maximum Non-Repetitive Forward Surge Current



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