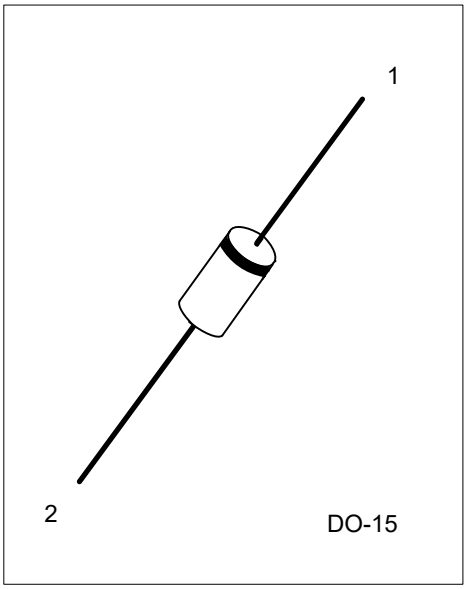
SF21P THRU SF28P

SCHOTTKY BRIDGE

2.0A SUPER FAST RECTIFIERS



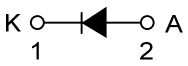
■ DESCRIPTION

The UTC **SF21P THRU SF28P** 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

* Super fast speed switching speed
* Low forward voltage drop
* Low leakage current
* Designed for Surface Mount Application
* High forward surge capability
* High reliability

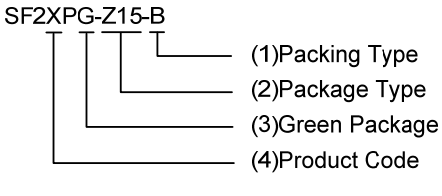
■ SYMBOL



■ ORDERING INFORMATION

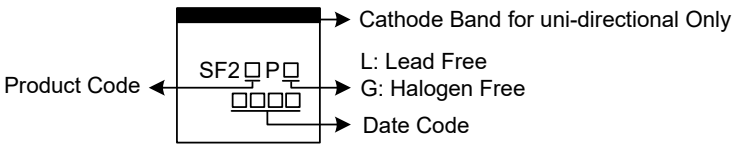
Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
SF2XPL-Z15-B	SF2XPG-Z15-B	DO-15	K	A	Tape Box

Note: Pin Assignment: K: Cathode A: Anode



(1) B: Tape Box
(2) Z15: DO-15
(3) G: Halogen Free and Lead Free, L: Lead Free
(4) X: refer to ABSOLUTE MAXIMUM RATINGS

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

PARAMETER	SYMBOL	RATINGS							UNIT
		SF21P	SF22P	SF23P	SF24P	SF25P	SF26P	SF28P	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current (T_A=55°C (Note 1))	I_O	2.0							A
Peak Forward surge current 8.3ms single half-sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	50							A
Operating Junction Temperature Range	T_J	-55 ~ +150							°C
Storage Temperature Range	T_{STG}	-55 ~ +150							°C

Notes: 1. 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.
2. Mounted on glass epoxy pc board with 1.3mm^2 solder pad.

■ THERMAL DATA

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

Note: Thermal resistance from junction to ambient 0.375"(9.5mm) lead length P.C.B. mounted.

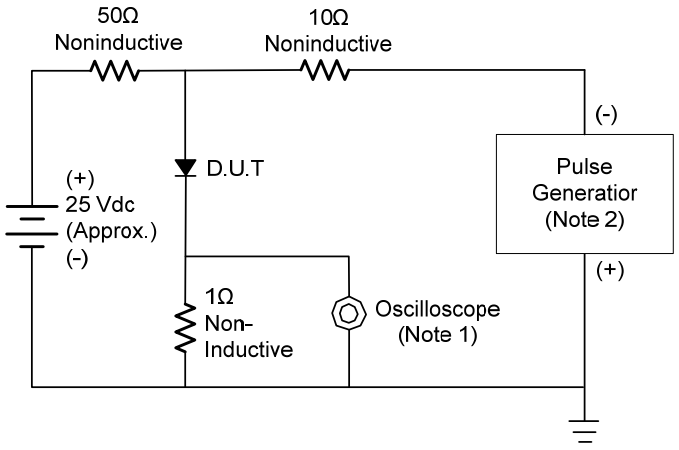
■ ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

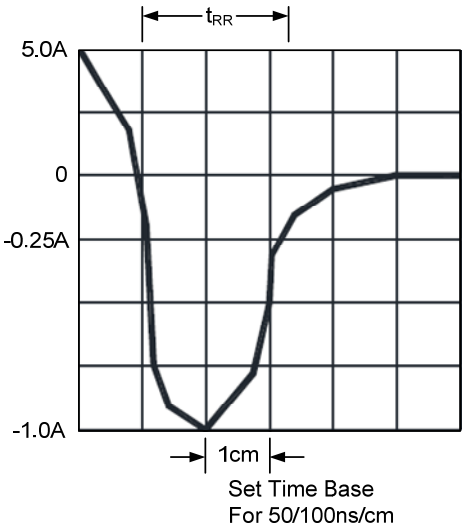
Ratings at 25°C ambient temperature unless otherwise specified.
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

PARAMETER	SYMBOL	TEST CONDITIONS	RATINGS							UNIT
			SF21P	SF22P	SF23P	SF24P	SF25P	SF26P	SF28P	
Maximum Forward Voltage	V_F	I_F=2.0A	0.95				1.25		1.70	V
Maximum Reverse Current at Rated DC Blocking Voltage	I_R	T_A=25°C	5.0							μA
		T_A=100°C	100							μA
Typical Junction Capacitance (Note 1)	t_{rr}		35							ns
Junction Capacitance (Note 2)	C_J		30				20			pF

Notes: 1. Reverse recovery test conditions I_F=0.5A, I_R=1A, I_{RR}=0.25A.
2. Measured at 1MHZ and applied reverse voltage of 4.0 V_{DC}.

■ TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT

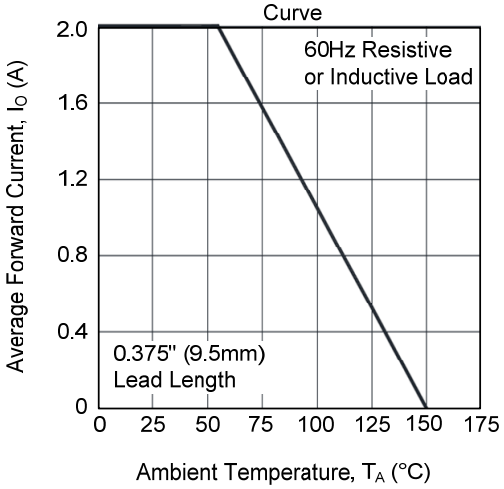




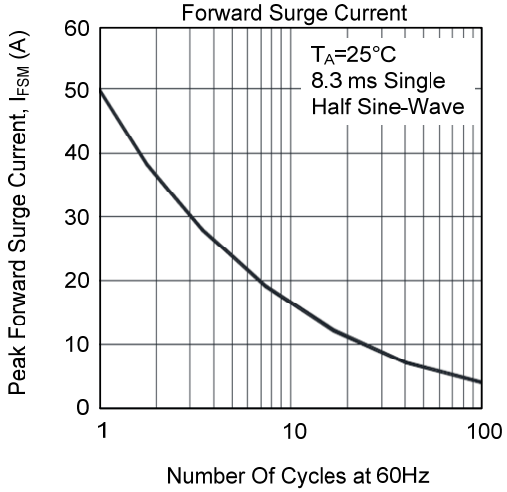
Notes: 1.Rise Time=7ns Max. Input Impedance=1 megohm. 22pF
2.Rise Time=10ns Max. Source Impedance=50Ω

■ TYPICAL CHARACTERISTICS

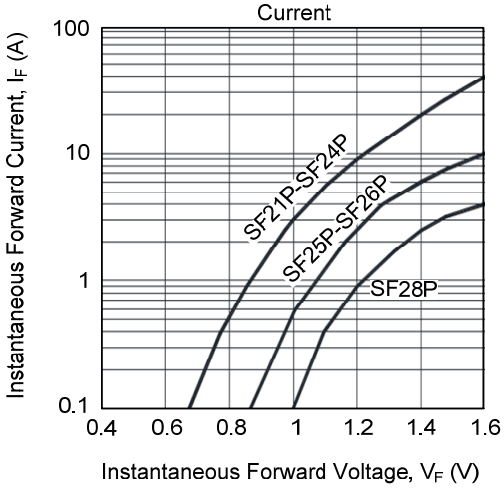
Typical Forward Current Derating Curve



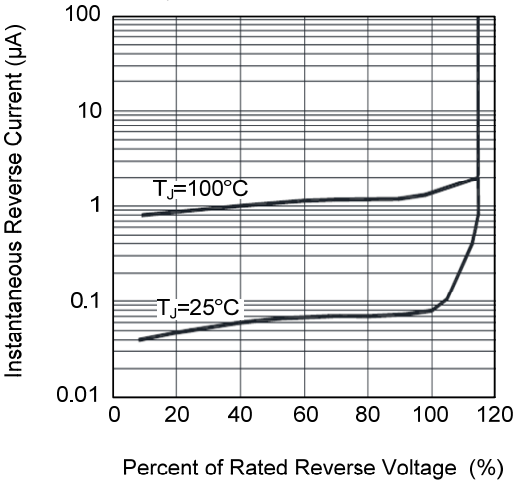
Maximum Non-Repetitive Peak Forward Surge Current



Typical Instantaneous Forward Current



Typical Reverse Characteristics



Typical Junction Capacitance