

SURFACE MOUNT SUPER FAST RECTIFIERS

REVERSE VOLTAGE - 50 to 600 Volts
FORWARD CURRENT - 3.0 Amperes

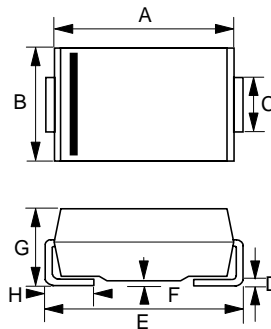
FEATURES

- Glass passivated chip
- Super fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- Case : Molded plastic
- Polarity : Color band denotes cathode
- Weight : 0.007 ounces, 0.21 grams

SMC



SMC		
DIM.	MIN.	MAX.
A	6.60	7.11
B	5.59	6.22
C	2.90	3.20
D	0.15	0.31
E	7.75	8.13
F	0.05	0.20
G	2.06	2.62
H	0.76	1.52

All Dimensions in millimeter

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, derate current by 20%

CHARACTERISTICS	SYMBOL	FS3A	FS3B	FS3C	FS3D	FS3G	FS3J	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	400	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	400	600	V
Maximum Average Forward Rectified Current @TL =110°C	I(AV)	3.0						A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	I _{FSM}	100						A
Maximum forward Voltage at 3.0A DC	V _F	0.92				1.25	1.30	V
Maximum DC Reverse Current @T _J =25°C at Rated DC Blocking Voltage @T _J =125°C	I _R	10 500						uA
Maximum Reverse Recovery Time (Note 1)	T _{RR}	35					50	ns
Typical Reverse Recovery Time	T _{RR}	20					30	ns
Typical Junction Capacitance (Note 2)	C _J	45						pF
Typical Thermal Resistance (Note 3)	R _{θJL}	10					15	°C/W
Typical Thermal Resistance (Note 3)	R _{θJA}	50						°C/W
Operating Temperature Range	T _J	-55 to + 150						°C
Storage Temperature Range	T _{STG}	-55 to + 150						°C

- NOTES : 1. Reverse Recovery Test Conditions :I_F=0.5A,I_R=1.0A,I_{RR}=0.25A.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3. Thermal Resistance junction to Lead.

RATING AND CHARACTERISTIC CURVES

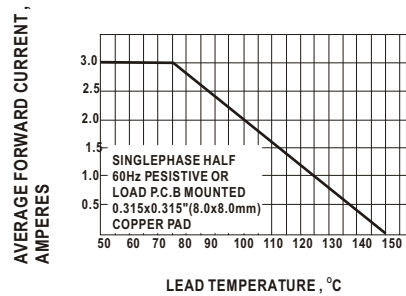
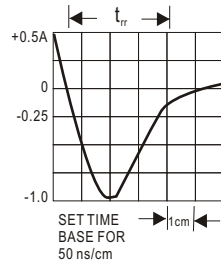
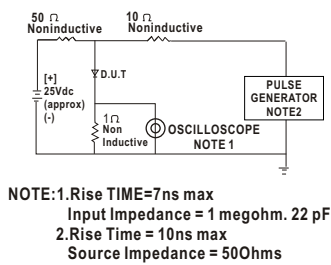


Fig. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

FIG. 2 - MAXIMUM AVERAGE FORWARD CURRENT RATING

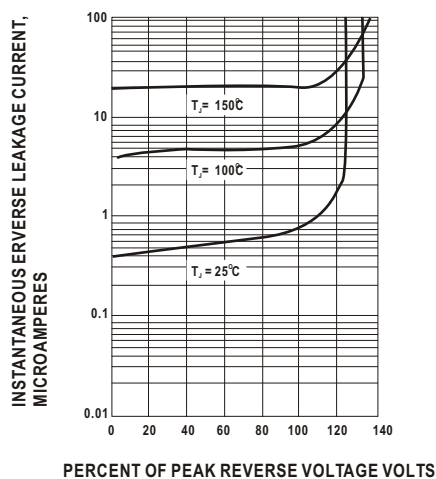


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

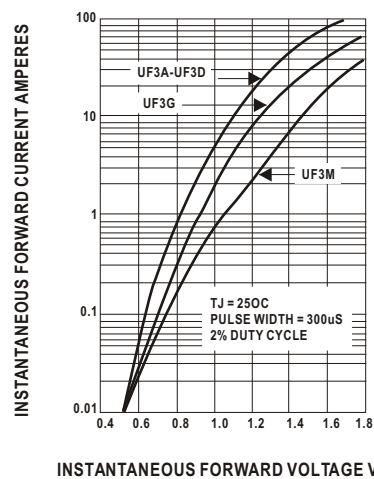


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

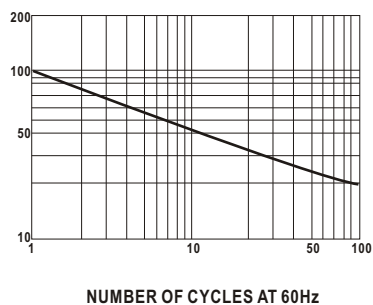


FIG. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

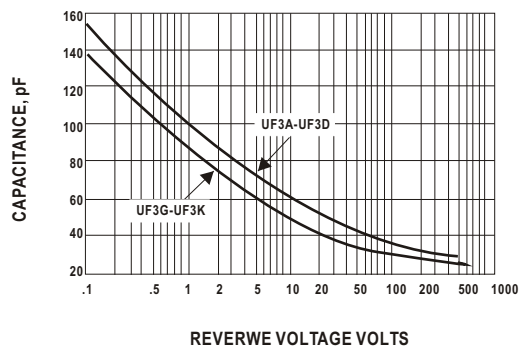


FIG. 6 - TYPICAL JUNCTION CAPACITANCE