

## 5A SUPER FAST RECOVERY RECTIFIER 50V-600V

Dim.	Value Inch[mm]	
	Min.	Max.
A	0.139 [3.55]	---
B	0.387 [9.85]	0.419 [10.66]
C	0.226 [5.75]	0.269 [6.85]
D	0.548 [13.93]	0.624 [15.87]
E	0.50 [12.70]	---
F	---	0.177 [4.50]
G	0.195[4.95]	0.204[5.18]
H	0.019 [0.50]	0.038 [0.96]
J	0.163 [4.16]	0.196 [5.00]
K	0.045 [1.15]	0.054 [1.39]
L	---	0.025 [0.65]

### PRODUCT FEATURES

1. FLAMMABILITY CLASSIFICATION: 94V-0
2. GLASS PASSIVATED CHIP JUNCTION
3. LOW FORWARD VOLTAGE DROP
4. HIGH SURGE CURRENT CAPABILITY
5. LOW LOSSES
6. CASE: MOLDED PLASTIC, TO-220AC
7. POLARITY: AS MARKED
8. WEIGHT: 2.05 GRAMS
9. LEADS: SOLDERABILITY PER MIL-STD-202 METHOD 208
10. RoHS, SUFFIX "-H" INDICATES HALOGEN FREE PARTS

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED STORAGE AND OPERATING TEMPERATURE RANGE -55°C TO +150°C. SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%.

RATINGS	SYMBOL	VALUE	UNITS
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT	$I_o$	5	A
PEAK FWD SURGE CURRENT, 8.3ms HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	$I_{FSM}$	100	A
TYPICAL THERMAL RESISTANCE (NOTE 1)	$R_{\theta jc}$	2.5	°C/W
MAXIMUM REVERSE CURRENT @ 25°C	$I_R$	5	uA
MAXIMUM REVERSE CURRENT @ 125°C	$I_R$	200	uA
MAXIMUM REVERSE RECOVERY TIME	$T_{RR}$	35	nS

1. THERMAL RESISTANCE JUNCTION TO CASE PER LEG MOUNTED ON HEAT SINK
2. REVERSE RECOVERY TEST CONDITIONS:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
3. MAXIMUM FORWARD VOLTAGE @  $I_o$  DC

PART NUMBER	MAX RECURRENT PK REV VOLTAGE $V_{RRM}$ (V)	MAX RMS VOLTAGE $V_{RMS}$ (V)	MAX DC BLOCKING VOLTAGE $V_{DC}$ (V)	MAX FWD VOLTAGE $V_F$ (V)	MARKING
SF5A05	50	35	50	0.98	SF5A05
SF5A10	100	70	100	0.98	SF5A10
SF5A20	200	140	200	0.98	SF5A20
SF5A40	400	280	400	1.3	SF5A40
SF5A60	600	420	600	1.85	SF5A60

## RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

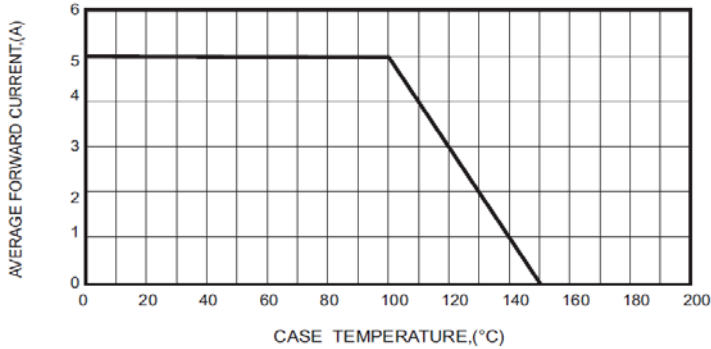


FIG.2-TYPICAL FORWARD CHARACTERISTICS

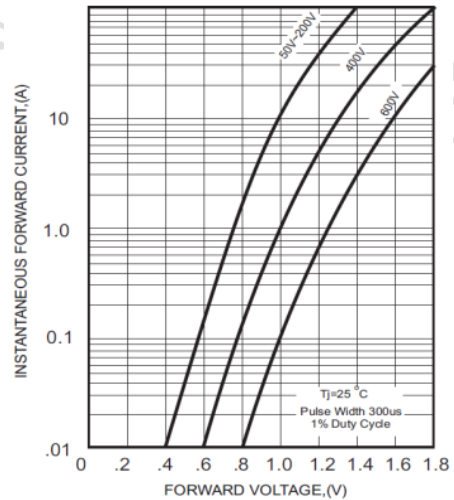


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

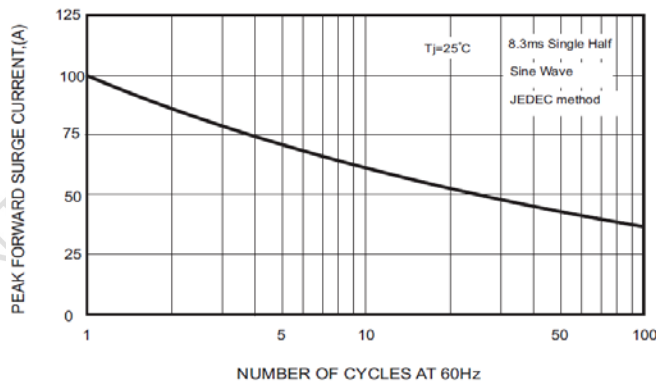


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

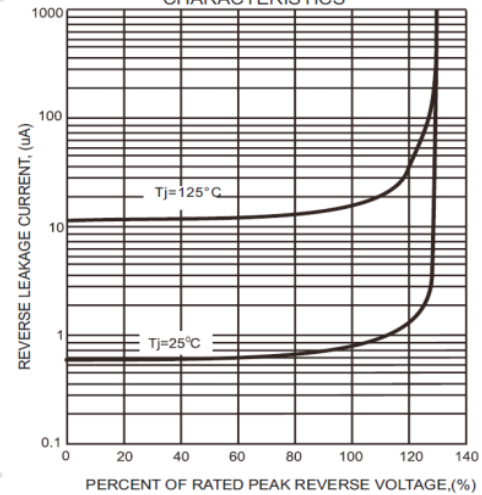
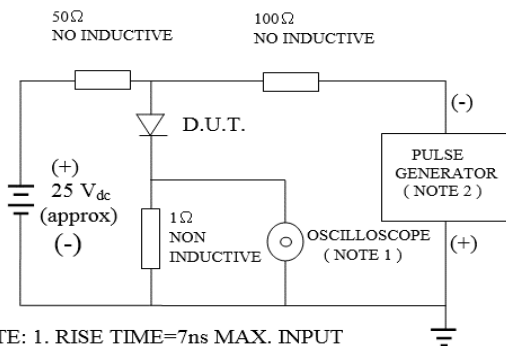


FIG. 1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. RISE TIME=7ns MAX. INPUT IMPEDANCE=1 MOhms 22PF  
 2. RISE TIME =10ns MAX. SOURCE IMPEDANCE=50 OHMS

