

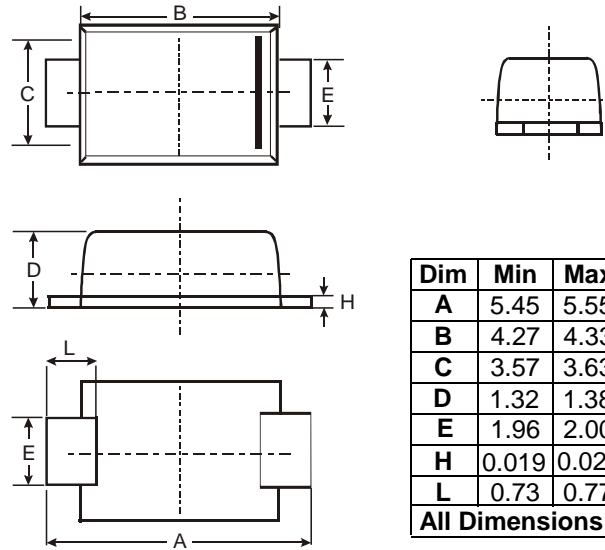
CURRENT 5.0 Ampere
 VOLTAGE RANG 50 to 1000 Volts

US5ABF THRU US5MBF

Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Ultra-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O

S M B F



Dim	Min	Max	Typ
A	5.45	5.55	5.50
B	4.27	4.33	4.30
C	3.57	3.63	3.60
D	1.32	1.38	1.35
E	1.96	2.00	1.98
H	0.019	0.021	0.20
L	0.73	0.77	0.75

All Dimensions in mm

Mechanical Data

- Case: SMBF , Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.0018 ounces, 0.09grams

Maximum Ratings and Electrical Characteristics

T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	US5A	US5B	US5D	US5G	US5J	US5K	US5M	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A =55°C	I _(AV)	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on	I _{FSM}	150.0							A
Maximum instantaneous forward voltage at 5.0A	V _F	1.0		1.40		1.70		V	
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	10.0 300.0							μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	50				75			ns
Typical junction capacitance (NOTE 2)	C _J	15				12			pF
Typical thermal resistance	R _{θJL}	15.0							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +150							°C

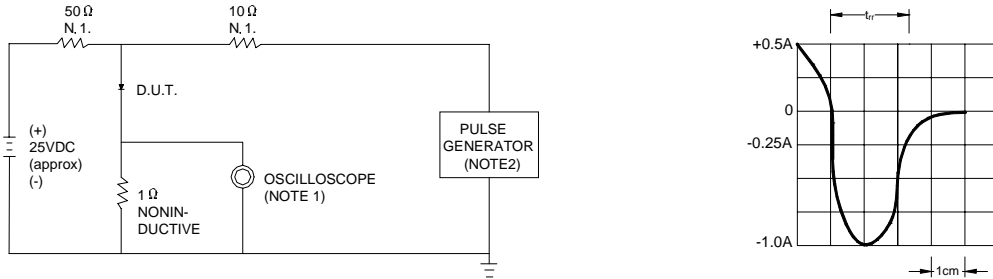
Note: 1. Reverse recovery condition I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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RATING AND CHARACTERISTIC CURVES US5AF Thru US5MF

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



NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.
 2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 20/30 ns/cm

FIG.2 – TYPICAL FORWARD CHARACTERISTIC

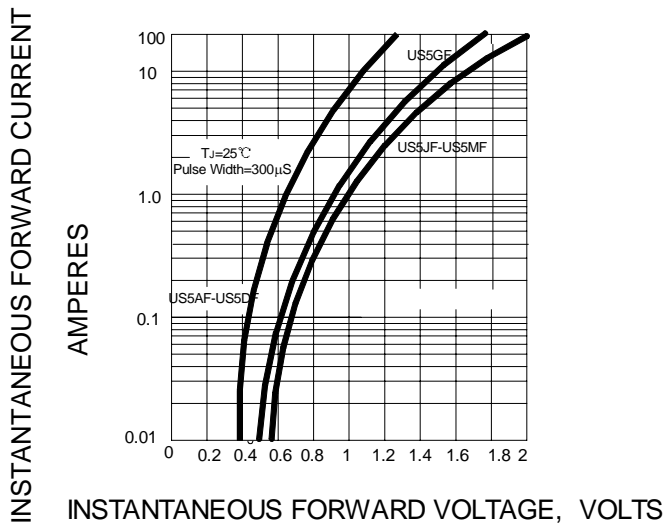


FIG.3 – FORWARD DERATING CURVE

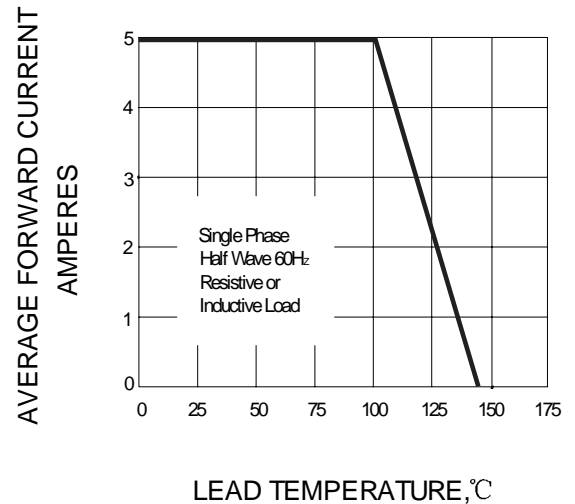


FIG.4 – TYPICAL JUNCTION CAPACITANCE

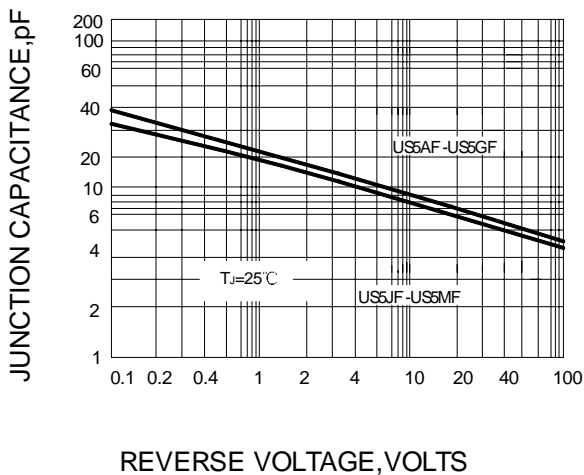


FIG.5 – PEAK FORWARD SURGE CURRENT

