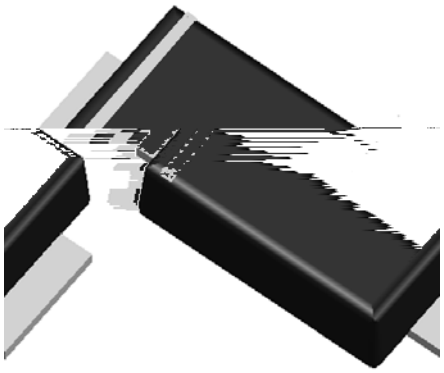
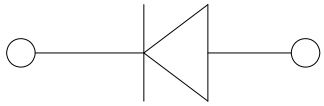
Surface Mount Super Fast Recovery Rectifier





Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Super Fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in high frequency rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

Mechanical Data

- **Package**: SMBF
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	MURS320BF	MURS340BF	MURS360BF
Device marking code			MURS320BF	MURS340BF	MURS360BF
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	200	400	600
Maximum RMS Voltage	V_{RMS}	V	140	280	420
Maximum DC blocking Voltage	V_{DC}	V	200	400	600
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	I_O	A	3.0		
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25	I_{FSM}	A	100		
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25			200		
Current squared time @1ms≤t≤8.3ms Tj=25 Rating of per diode	I^2t	A^2s	41.5		
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	63	55	50
Storage temperature	T_{stg}		-55 ~ +150		
Junction temperature	Tj		-55 ~ +150		

■Electrical Characteristics T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MURS320BF	MURS340BF	MURS360BF
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=3.0A	0.92	1.25	
Maximum reverse recovery time	t_{rr}	ns	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	35	50	
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	Tj =25	5		
			Tj =125	50		

■Dynamic Characteristics

◆ MURS320BF

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Reverse Recovery Time	T_{RR}	ns	Tj=25	I_F=1A di/dt=-50A/us V_{RM}=30V	-	30	-
			Tj=25	I_F=3A di/dt=-200A/us V_{RM}=100V	-	29	-
			Tj=125		-	35	-
Peak recovery current	I_{RRM}	A	Tj=25		-	3.8	-
			Tj=125		-	6.5	-
Reverse recovery charge	Qrr	nC	Tj=25		-	39.9	-
			Tj=125		-	113.2	-
Non-repetitive avalanche energy	E_{AS}	mJ	Tj=25	I_R=3.6 A L=15 mH	116.6	-	-

◆ MURS340BF

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Reverse Recovery Time	T_{RR}	ns	Tj=25	I_F=1A di/dt=-50A/us V_{RM}=30V	-	40	-
			Tj=25	I_F=3A di/dt=-200A/us V_{RM}=200V	-	32	-
			Tj=125		-	52	-
Peak recovery current	I_{RRM}	A	Tj=25		-	4.8	-
			Tj=125		-	7.5	-
Reverse recovery charge	Qrr	nC	Tj=25		-	76.5	-
			Tj=125		-	196.6	-
Non-repetitive avalanche energy	E_{AS}	mJ	Tj=25	I_R=0.8 A L=15 mH	4.8	-	-

◆ MURS360BF

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Reverse Recovery Time	T_{RR}	ns	Tj=25	I_F=1A di/dt=-50A/us V_{RM}=30V	-	48	-
			Tj=25	I_F=3A di/dt=-200A/us V_{RM}=400V	-	47	-
			Tj=125		-	71	-
Peak recovery current	I_{RRM}	A	Tj=25		-	5.9	-
			Tj=125		-	9.0	-
Reverse recovery charge	Qrr	nC	Tj=25		-	138.1	-
			Tj=125		-	319.6	-
Non-repetitive avalanche energy	E_{AS}	mJ	Tj=25	I_R=0.8 A L=15 mH	4.8	-	-

■Thermal Characteristics T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	MURS320BF	MURS340BF	MURS360BF
Typical Thermal resistance	$R_{\theta J-A}$(1)	/W	60		
	$R_{\theta J-L}$(1)		20		
	$R_{\theta J-C}$(1)		15		

Note:
(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

■ Characteristics (Typical)

FIG.1: Io-TL Curve

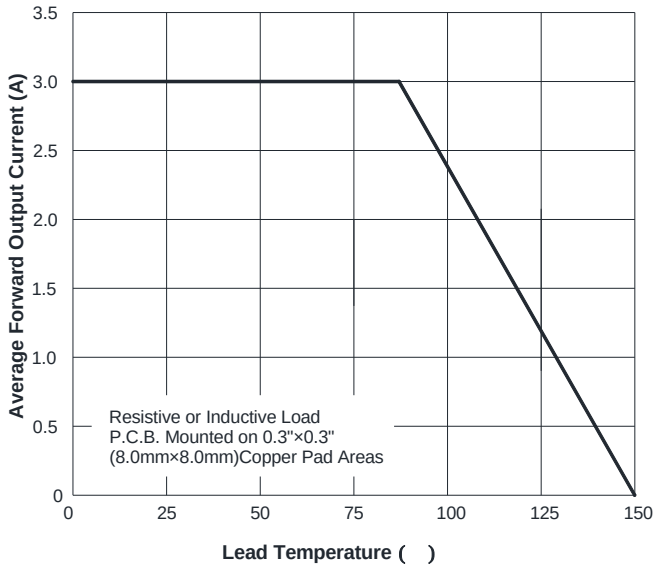


FIG.2: Forward Surge Current Capadility

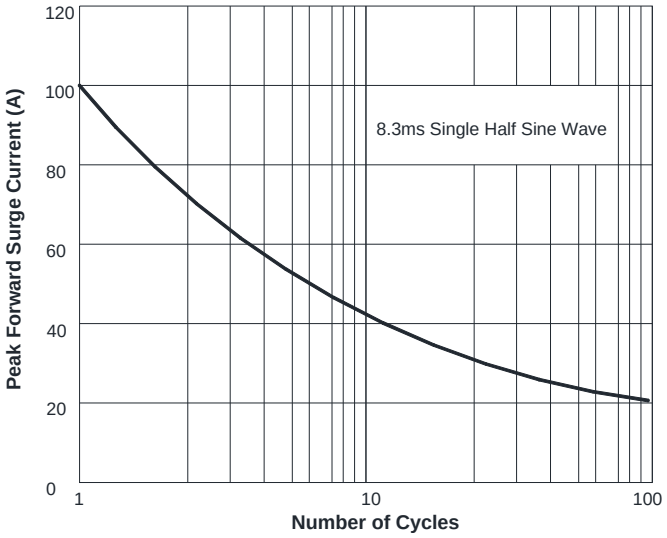


FIG.3: Typical Forward Voltage

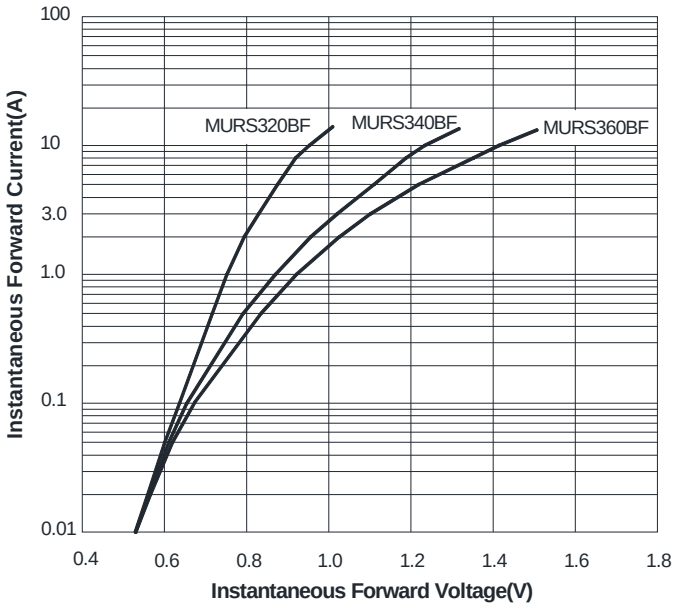


FIG.4: Typical Reverse Characteristics

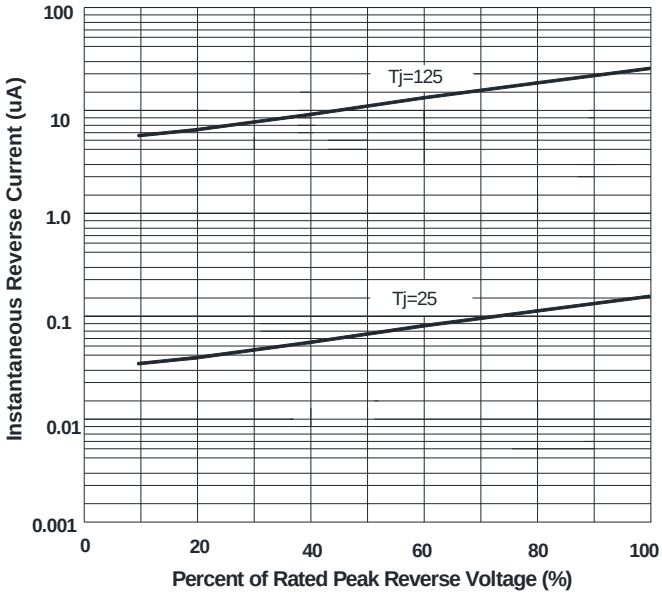
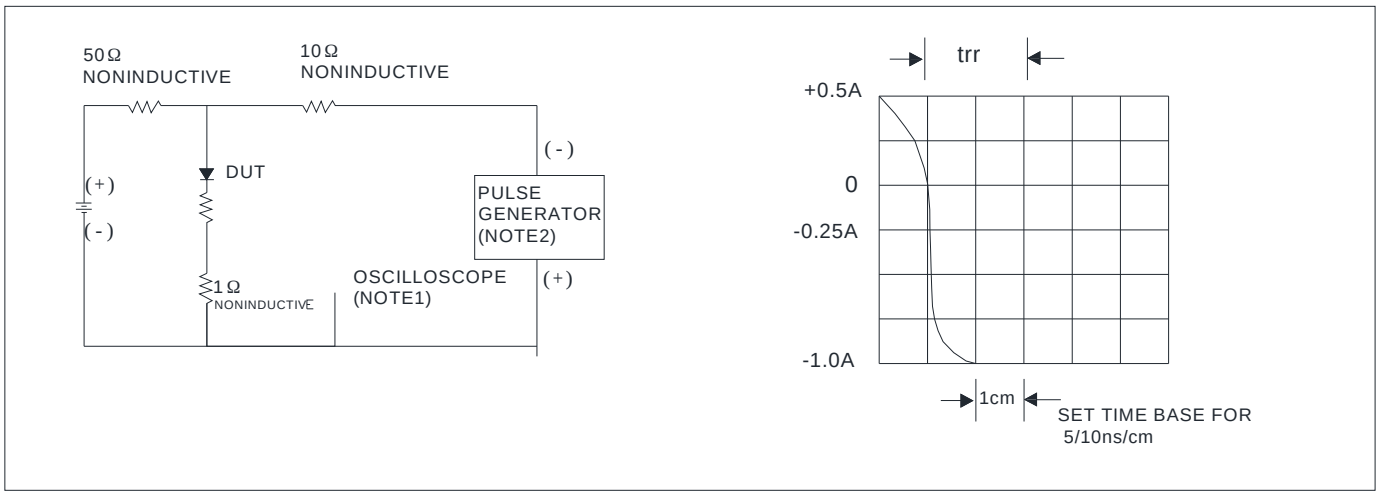


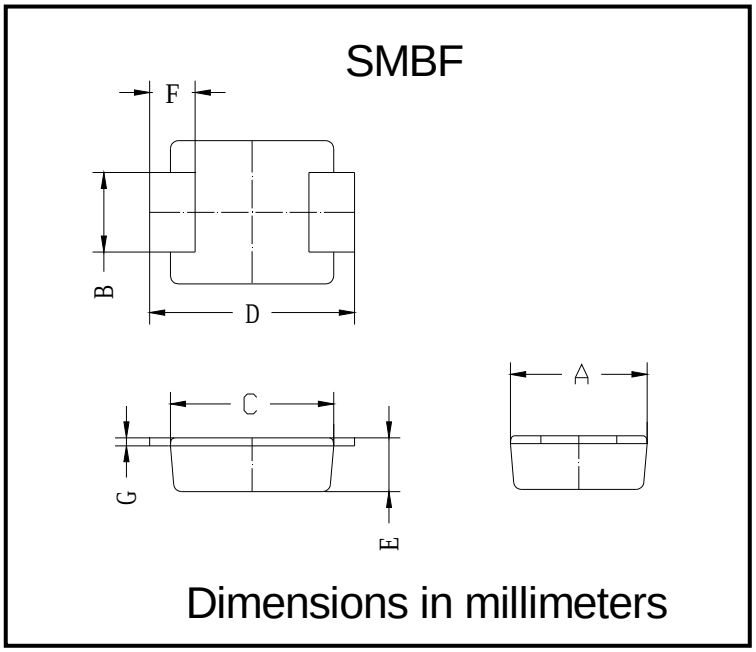
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Ordering Information (Example)

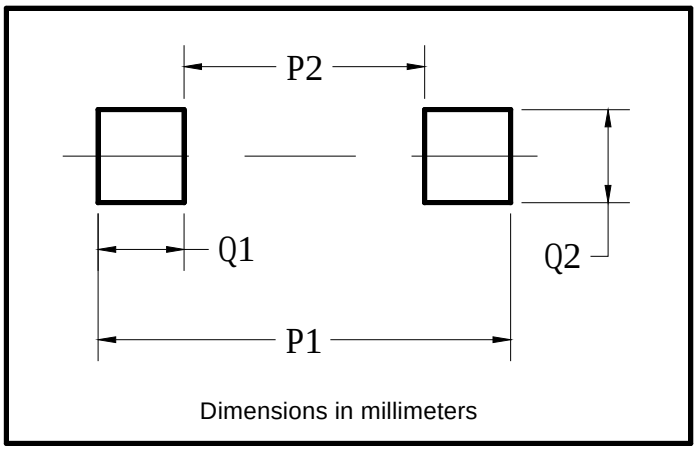
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURS320BF – MURS360BF	F1	Approximate 0.065	5000	/	80000	13” reel

■ Outline Dimensions



SMBF		
Dim	Min	Max
A	3.40	3.80
B	1.90	2.10
C	4.15	4.45
D	5.10	5.60
E	1.05	1.55
F	0.70	1.35
G	0.15	0.25

■ Suggested pad layout



Dim	Milimeters
P1	6.20
P2	2.40
Q1	1.90
Q2	2.20

Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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