

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:** DO-214AA (SMB)
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 (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURS120B	MURS140B	MURS160B
Device marking code			MURS120B	MURS140B	MURS160B
Repetitive peak reverse voltage	VRRM	V	200	400	600
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	IO	A	1.0		
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, Ta=25°C	IFSM	A	30		
Storage temperature	Tstg	°C	-55~+150		
Junction temperature	Tj	°C	-55~+150		

■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MURS120B	MURS140B	MURS160B
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=1.0A	0.92	1.25	
Maximum reverse recovery time	tr	ns	IF=0.5A, IR=1.0A, Ir=0.25A	25	50	
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	IRRM	μA	Ta=25°C	5.0		
			Ta=125°C	50		



MURS120B THRU MURS160B

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURS120B	MURS140B	MURS160B
Typical Thermal resistance	R θ J-A	°C/W	65 ⁽¹⁾		
	R θ J-L		20 ⁽¹⁾		

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)

FIG1: I_o-TL Curve

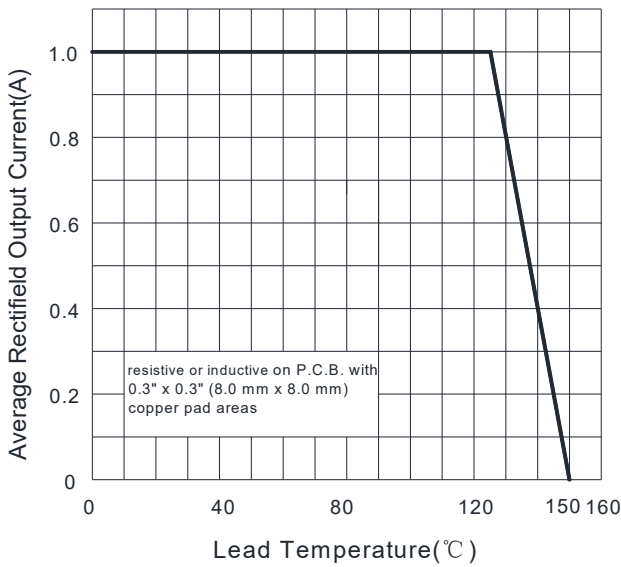


FIG2: Surge Forward Current Capability

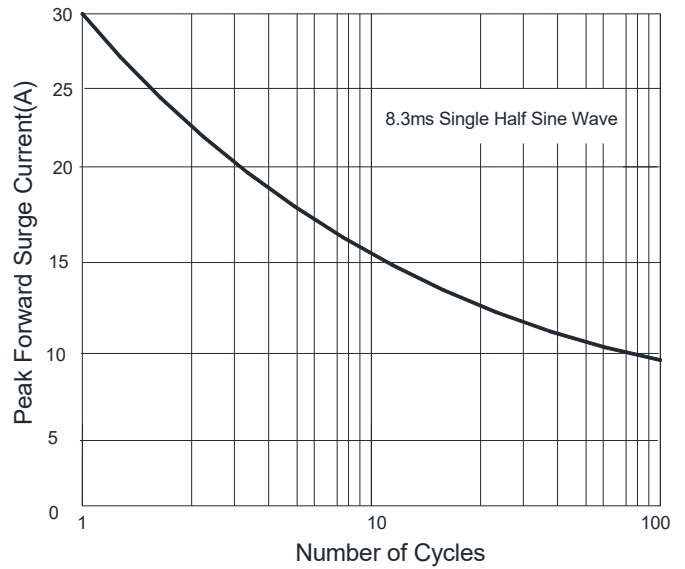


FIG3: Typical Forward Voltage

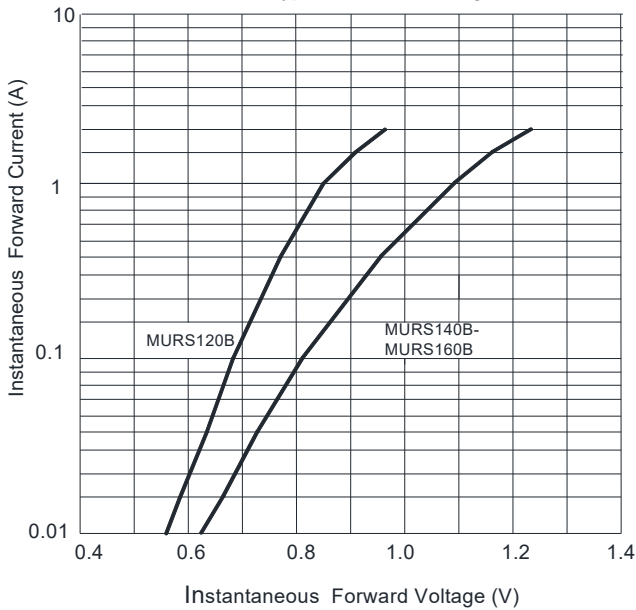
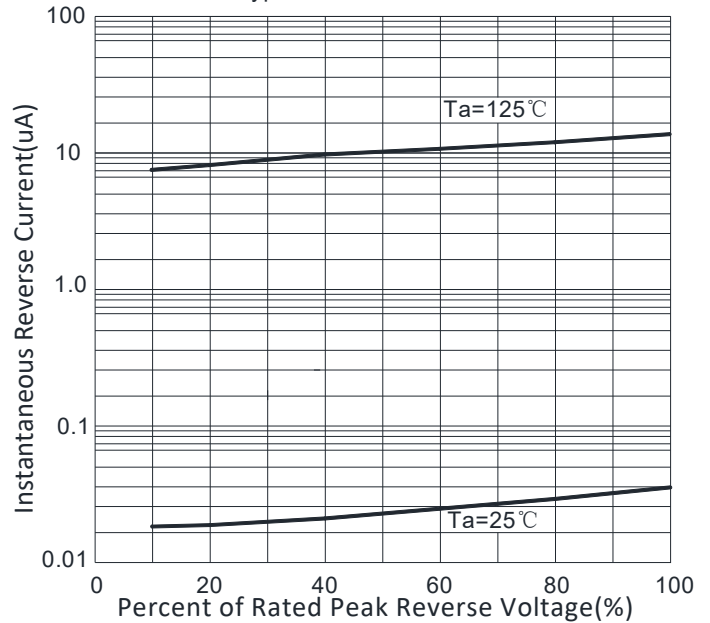


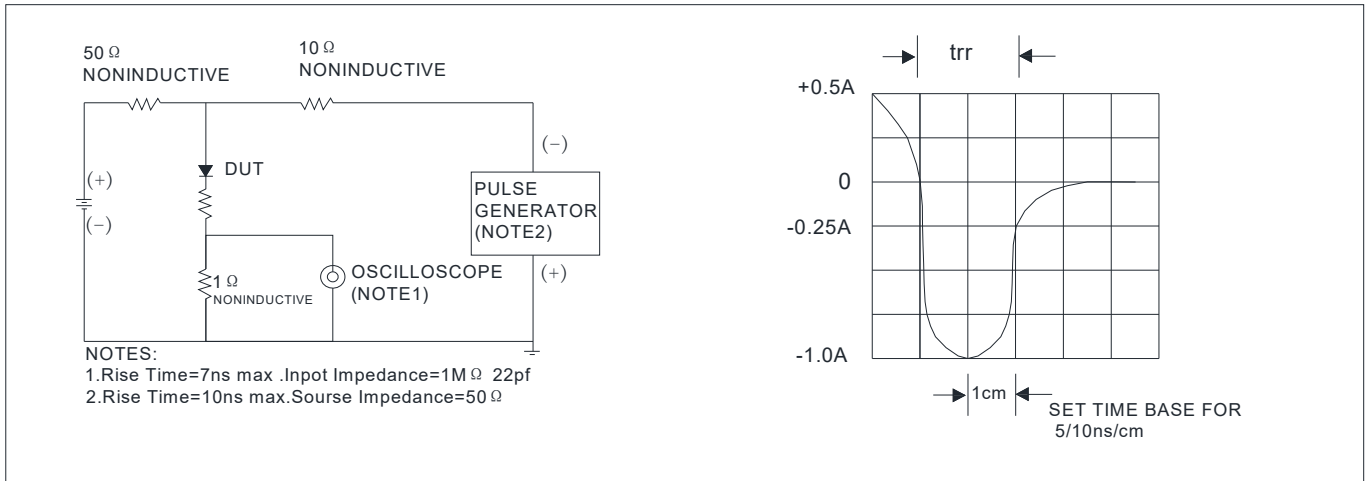
FIG4: Typical Reverse Characteristics





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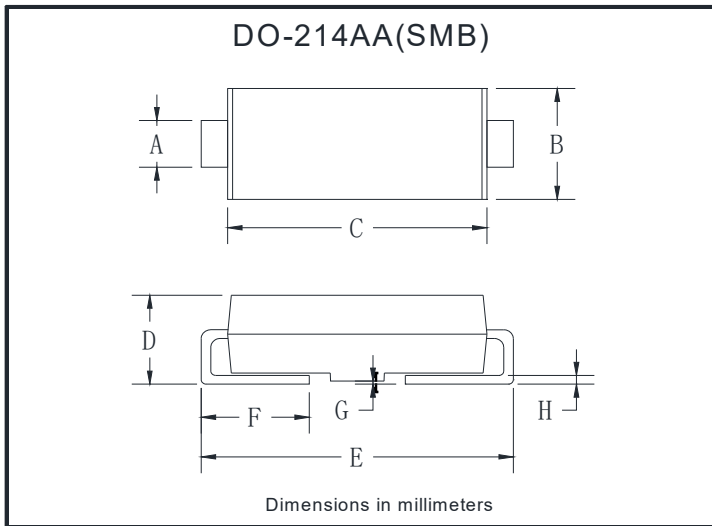
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURS120B-MURS160B	F1	Approximate 0.096	3000	6000	48000	13" reel
MURS120B-MURS160B	F2	Approximate 0.096	750	3000	24000	7" reel
MURS120B-MURS160B	F3	Approximate 0.096	500	2000	16000	7" reel

Outline Dimensions

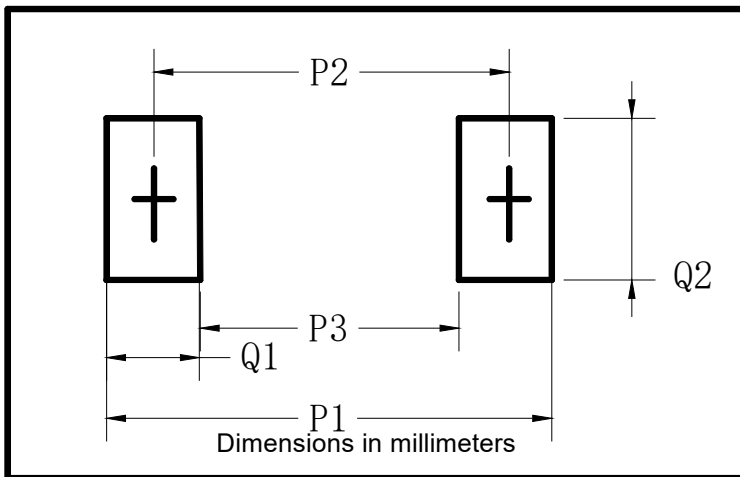


DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.25	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.10	0.20
H	0.15	0.31



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■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3



MURS120B THRU MURS160B

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