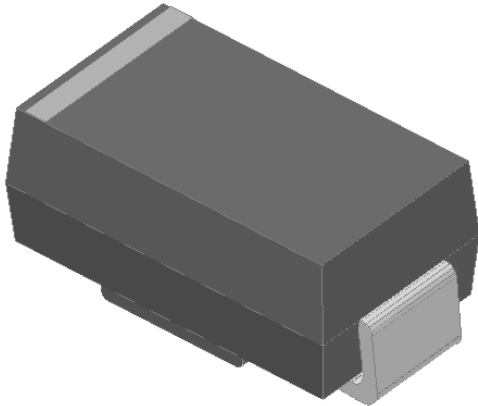


## Surface Mount Super Fast Recovery Rectifier

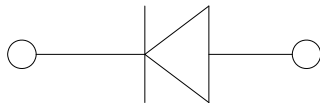


### Features

- 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-214AC(SMA)  
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	MURS120	MURS140	MURS160
Device marking code			MURS120	MURS140	MURS160
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	MURS120	MURS140	MURS160
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=1.0A	0.92	1.25	
Maximum reverse recovery time	T <sub>RR</sub>	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		



# MURS120 THRU MURS160

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

PARAMETER	SYMBOL	UNIT	MURS120	MURS140	MURS160
Typical Thermal resistance	RθJ-A	°C/W	70 <sup>(1)</sup>		
	RθJ-L		22 <sup>(1)</sup>		

Note:  
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

## ■ Characteristics (Typical)

FIG1: Io-TL Curve

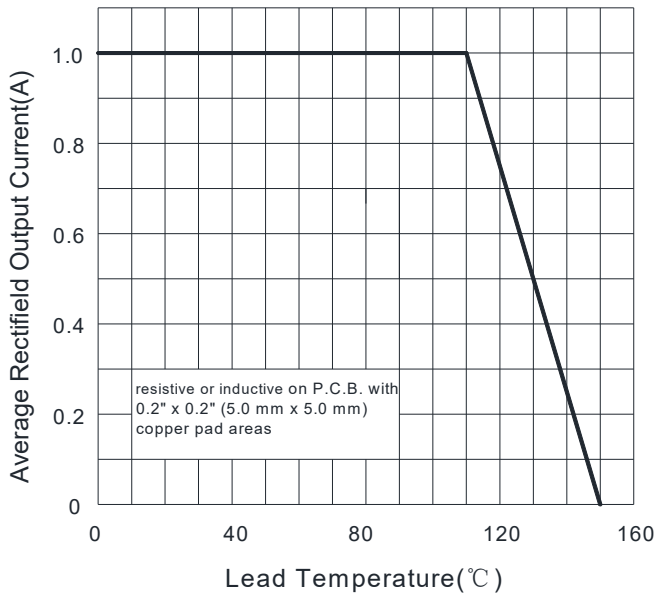


FIG2: Surge Forward Current Capability

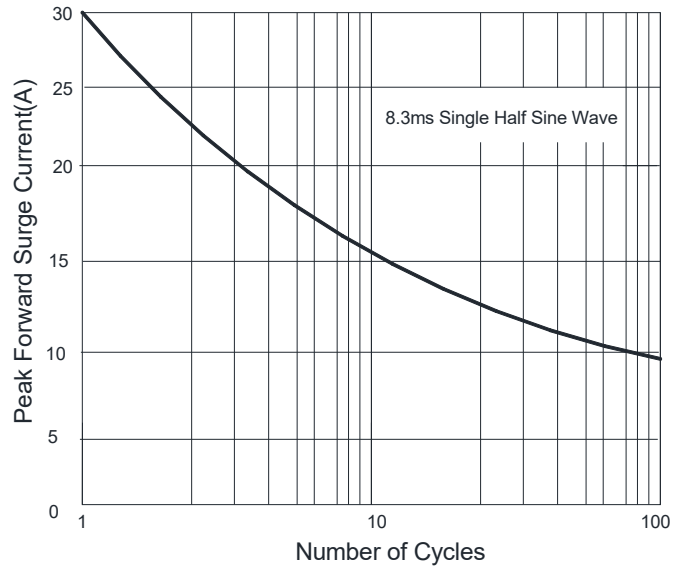


FIG3: Forward Voltage

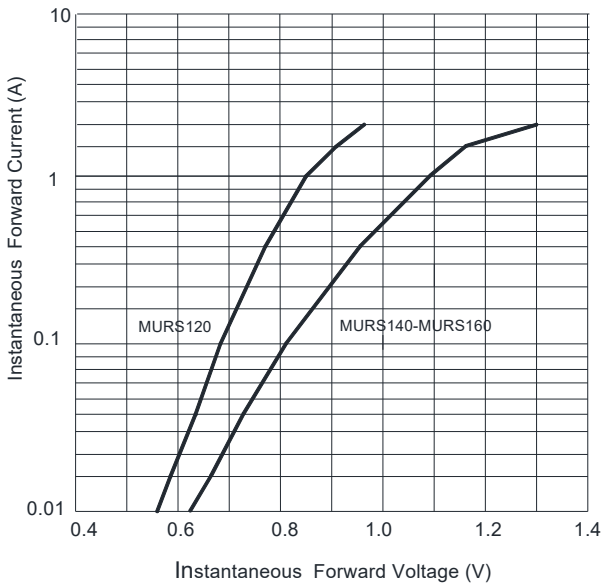
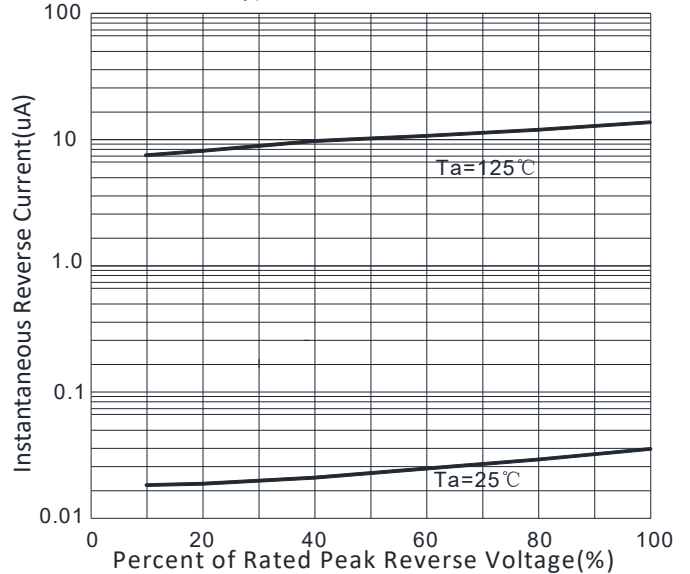


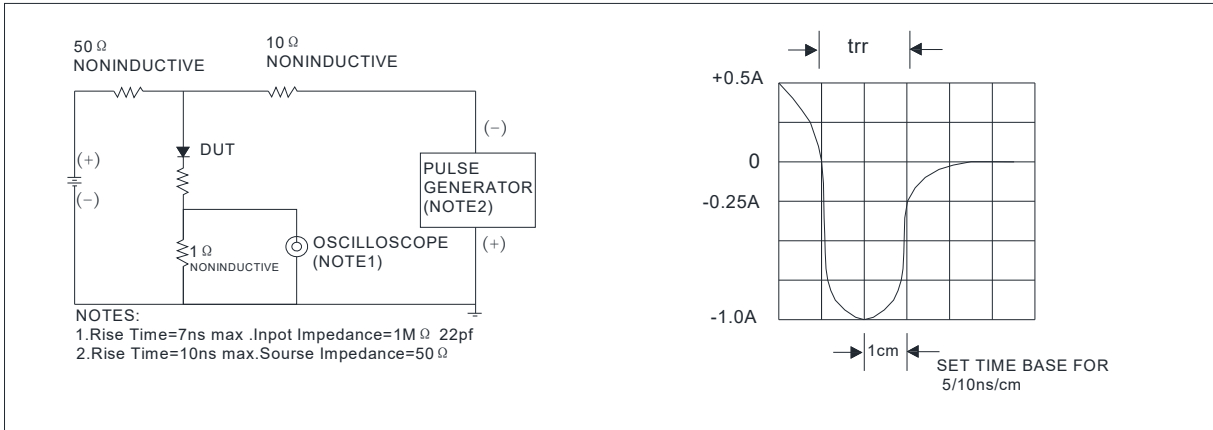
FIG4: Typical Reverse Characteristics





# MURS120 THRU MURS160

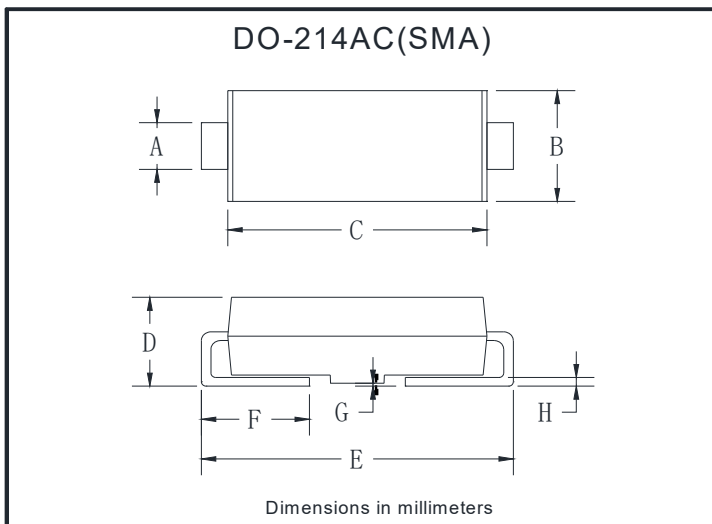
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



## Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURS120-MURS160	F1	Approximate 0.059	5000	10000	80000	13" reel
MURS120-MURS160	F2	Approximate 0.059	7500	15000	120000	13" reel
MURS120-MURS160	F3	Approximate 0.059	7500	15000	60000	13" reel
MURS120-MURS160	F4	Approximate 0.059	1800	7200	57600	7" reel
MURS120-MURS160	F5	Approximate 0.059	2000	8000	64000	7" reel
MURS120-MURS160	F6	Approximate 0.059	5000	10000	100000	13" reel

## Outline Dimensions

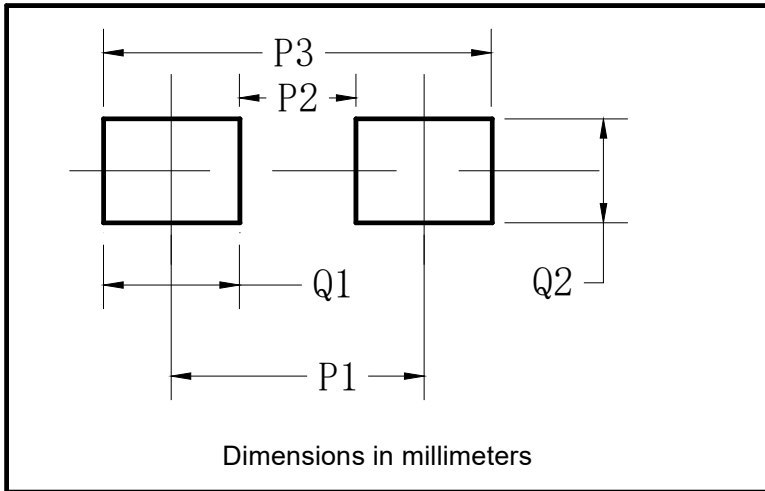


DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.25	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.08	0.20
H	0.15	0.31



## MURS120 THRU MURS160

### ■ Suggested Pad Layout



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70



## MURS120 THRU MURS160

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