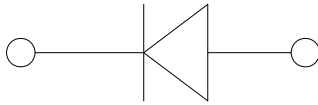
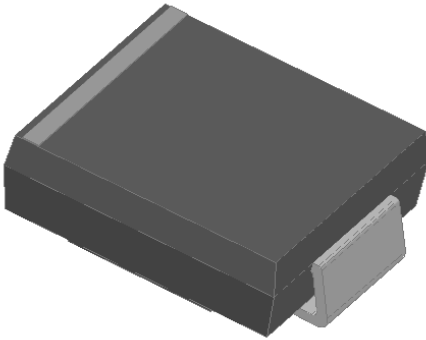


## Surface Mount Ultrafast Rectifier Diode



### Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 260 °C max. 10 s, per JESD 22-B106

### Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

### Mechanical Data

- **Package:** DO-214AB (SMC)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURS320
Device marking code			MURS320
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	200
Average Rectified Output Current @60Hz sine wave, Resistance load, TL (FIG.1)	I <sub>O</sub>	A	3.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T <sub>a</sub> =25°C	I <sub>FSM</sub>	A	100
Typical junction capacitance@ Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	C <sub>j</sub>	pF	63
Storage Temperature	T <sub>stg</sub>	°C	-55 ~+150
Junction Temperature	T <sub>j</sub>	°C	-55 ~+150

### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MURS320
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =3.0A	0.92
Maximum reverse recovery time	T <sub>RR</sub>	ns	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	35
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	T <sub>a</sub> =25°C	5
			T <sub>a</sub> =125°C	50



# MURS320

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER		SYMBOL	UNIT	MURS320
Typical Thermal Resistance	Junction to ambient	R <sub>θJ-A</sub>	°C/W	65 <sup>1)</sup>
	Junction to lead	R <sub>θJ-L</sub>		20 <sup>1)</sup>
	Junction to case	R <sub>θJ-C</sub>		15 <sup>1)</sup>

Note(1)

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURS320	F1	Approximate 0.248	3000	6000	42000	13" reel

## ■ Characteristics(Typical)

FIG.1: I<sub>o</sub>-T<sub>L</sub> Curve

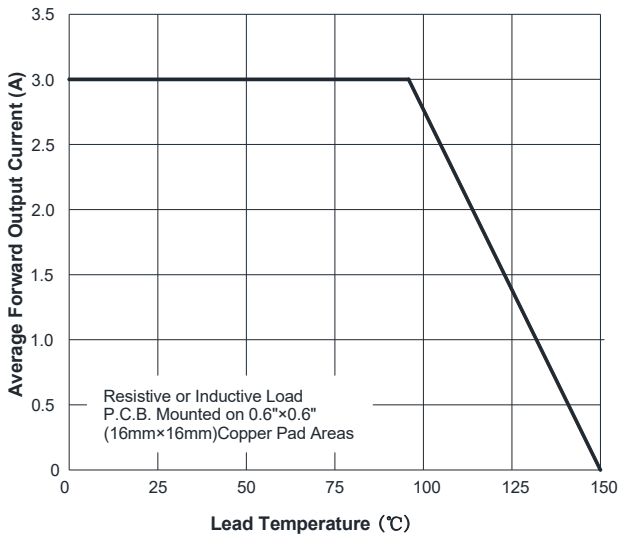


FIG.2: Forward Surge Current Capacity

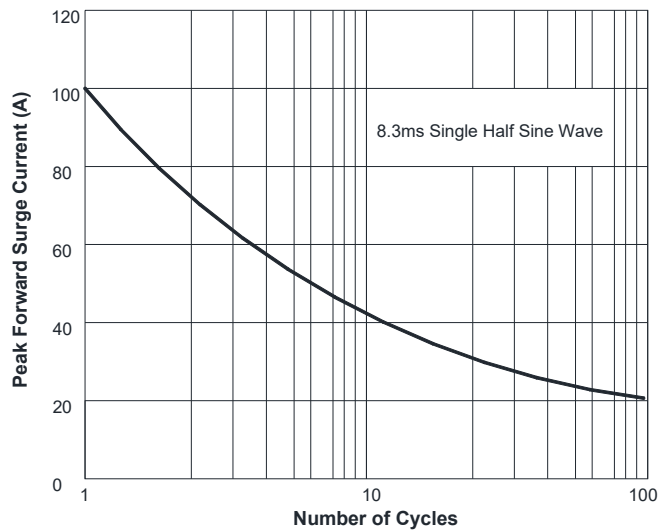


FIG.3: Typical Forward Voltage

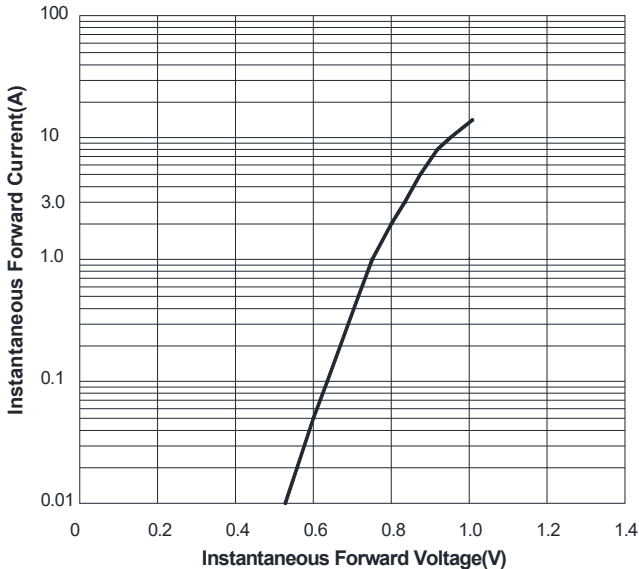


FIG.4: Typical Reverse Characteristics

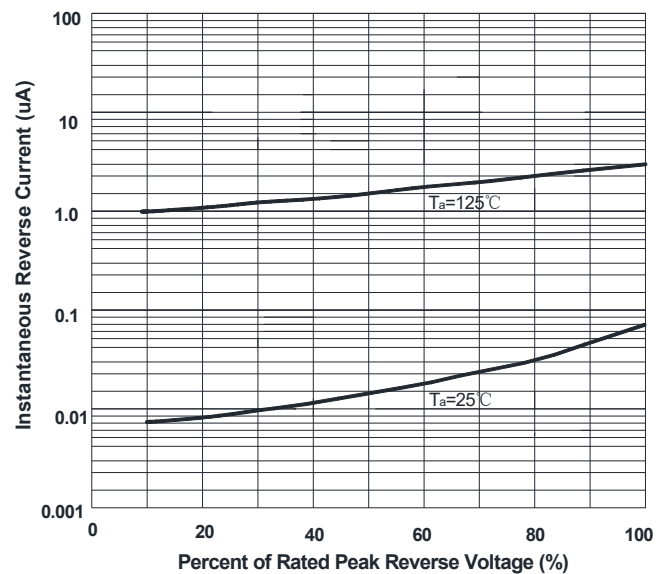
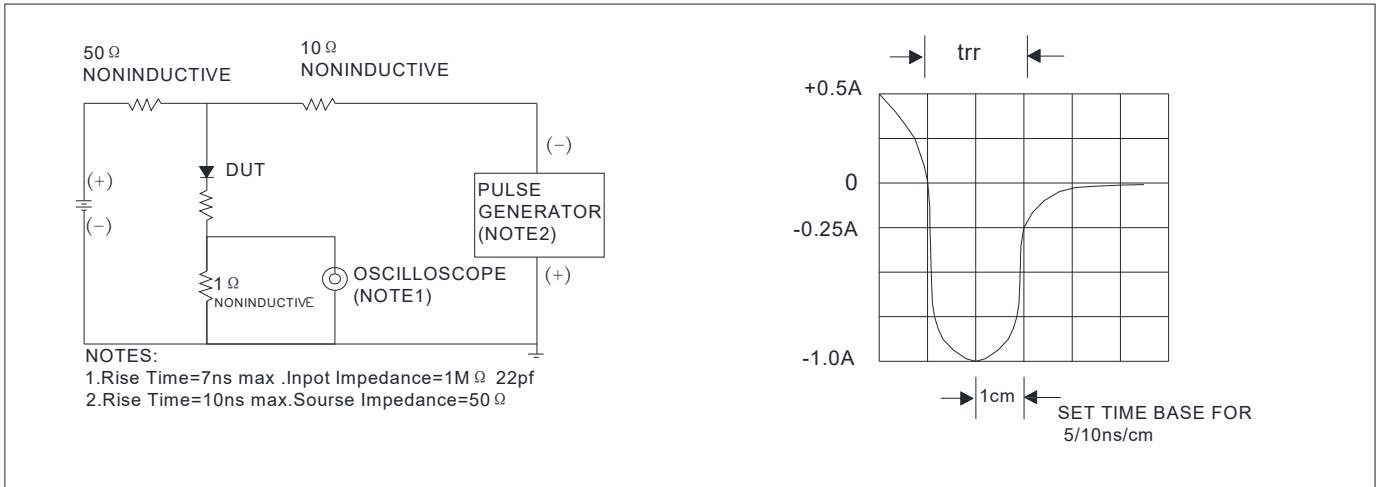
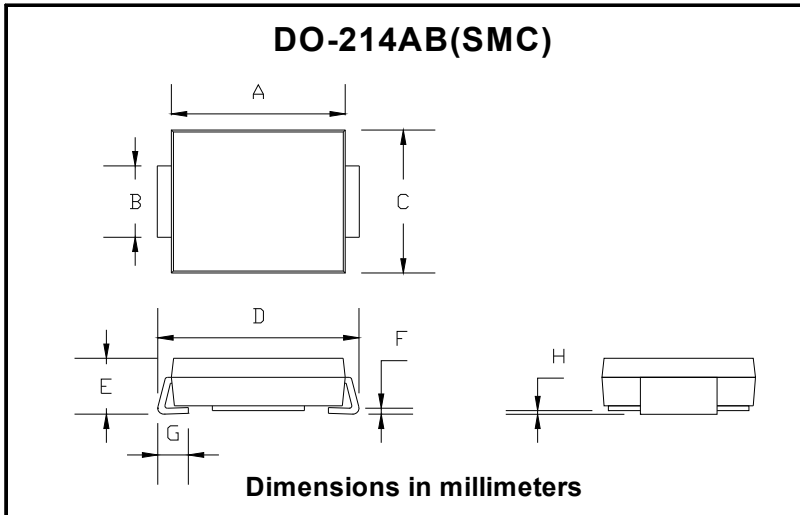


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

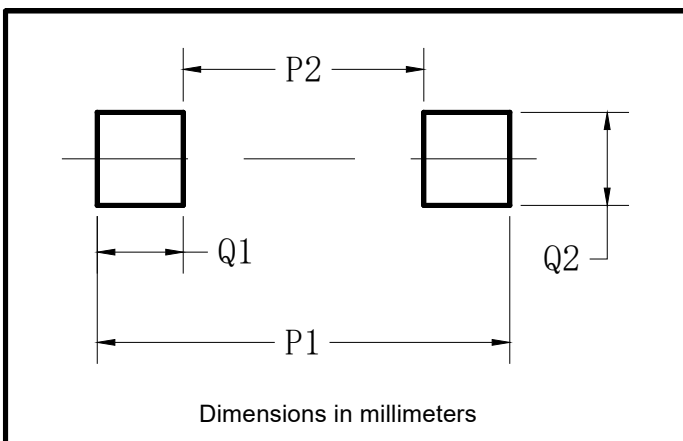


## ■ Outline Dimensions



DO-214AB (SMC)		
Dim	Min	Max
A	6.60	7.11
B	2.85	3.27
C	5.59	6.22
D	7.75	8.13
E	1.99	2.61
F	0.15	0.31
G	0.76	1.52
H	0.10	0.20

## ■ Suggested pad layout



Dim	Typ
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82



## MURS320

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