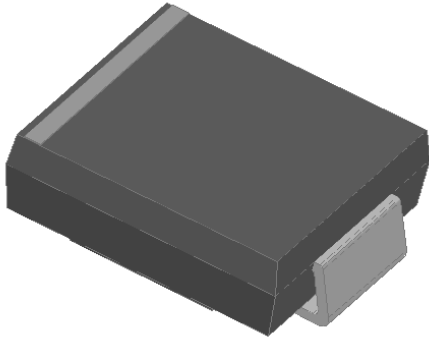


Surface Mount Ultrafast Rectifier Diode



Features

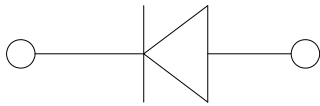
- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 260 °C max. 10 s, per JESD 22-B106

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, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end



■ Maximum Ratings (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURS360
Device marking code			MURS360
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	600
Maximum RMS Voltage	V _{RMS}	V	420
Maximum DC blocking Voltage	V _{DC}	V	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, T _j =25°C	I _{FSM}	A	100
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			200
Current squared time @1ms≤t≤8.3ms T _j =25°C, Rating of per diode	I ² t	A ² s	41.5
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C _j	pF	50
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150



MURS360

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MURS360
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =3.0A	1.25
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	50
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	5
			T _j =125°C	50

■Dynamic Characteristics

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS		Min	Typ	Max
Reverse Recovery Time	T _{RR}	ns	T _j =25°C	I _F =1A, di/dt=-50A/us VRM=30V	-	48	-
			T _j =25°C	I _F =3A di/dt=-200A/us V _{RM} =400V	-	47	-
			T _j =125°C		-	71	-
Peak recovery current	I _{RRM}	A	T _j =25°C	I _F =3A di/dt=-200A/us V _{RM} =400V	-	5.9	-
			T _j =125°C		-	9.0	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C	I _F =3A di/dt=-200A/us V _{RM} =400V	-	138.1	-
			T _j =125°C		-	319.6	-
Non-repetitive avalanche energy	E _{AS}	mJ	T _j =25°C	I _R =0.8 A, L=15 mH	4.8	-	-

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

PARAMETER	SYMBOL	UNIT	MURS360
Typical Thermal resistance	R _{θJ-A} ⁽¹⁾	°C/W	50
	R _{θJ-L} ⁽¹⁾		18
	R _{θJ-C} ⁽¹⁾		12

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
MURS360	F1	Approximate 0.248	3000	6000	42000	13" reel

■ Characteristics(Typical)

FIG.1: I_o-T_L Curve

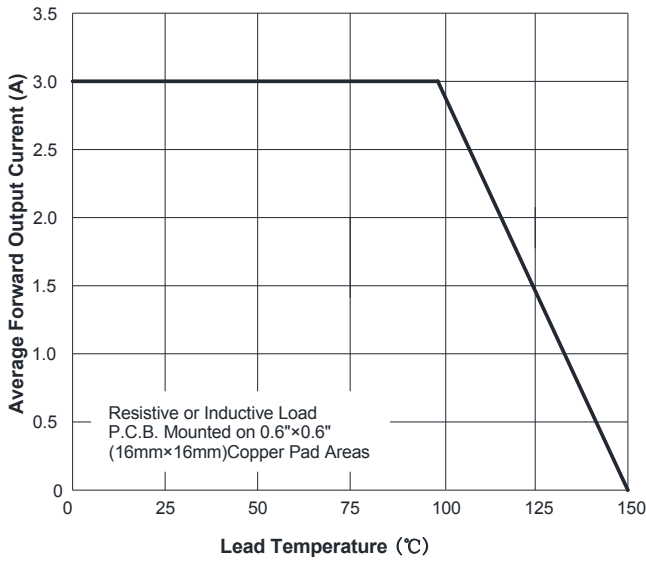


FIG.2: Forward Surge Current Capadility

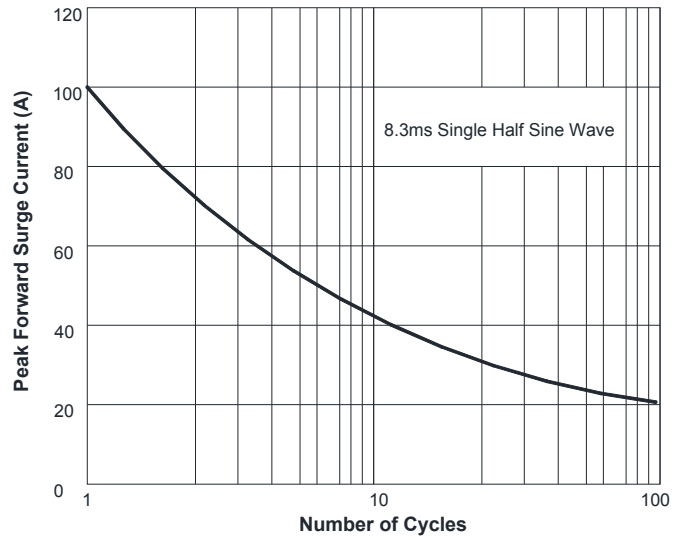


FIG.3: Typical Forward Voltage

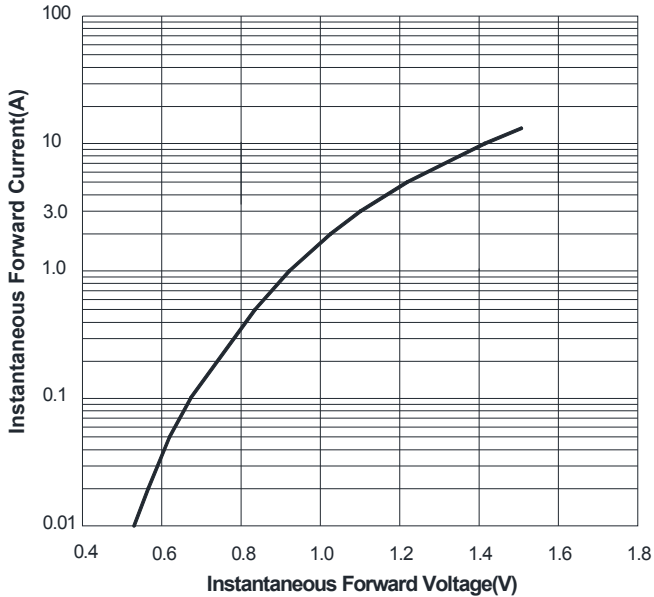


FIG.4: Typical Reverse Characteristics

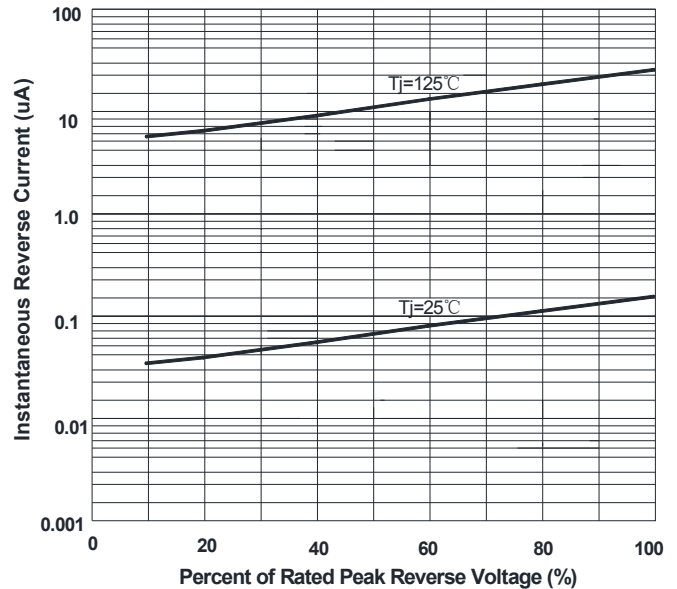
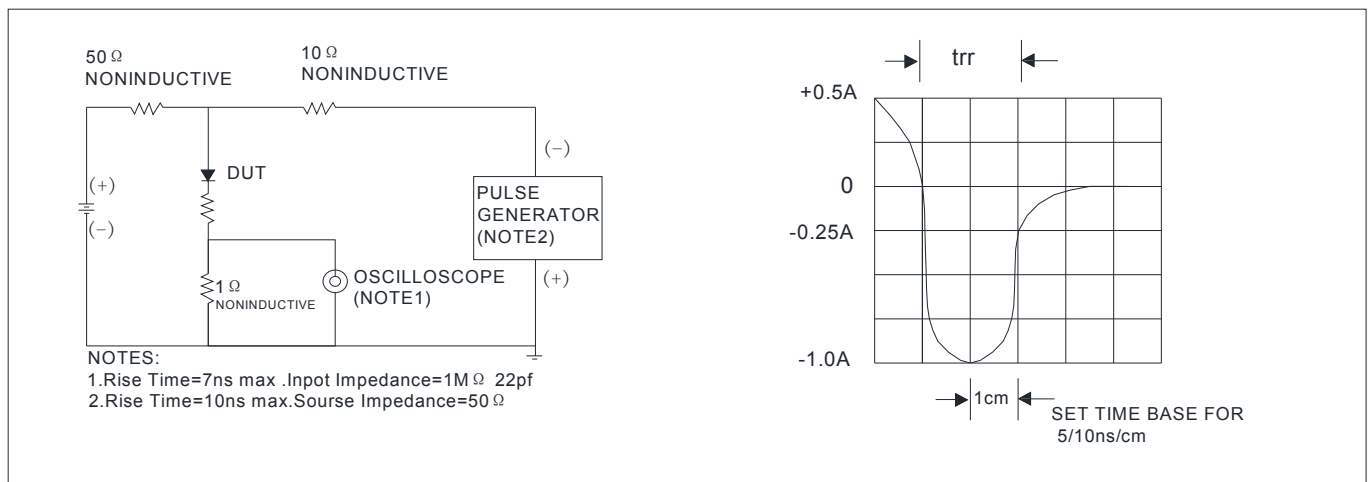
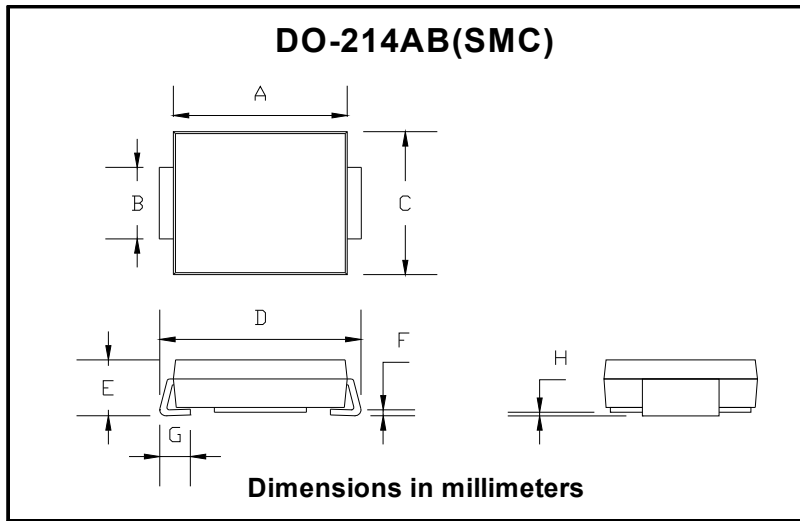


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

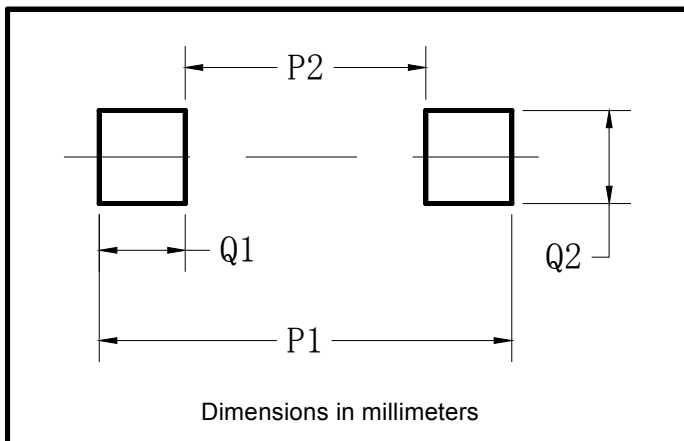


■ Outline Dimensions



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



MURS360

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