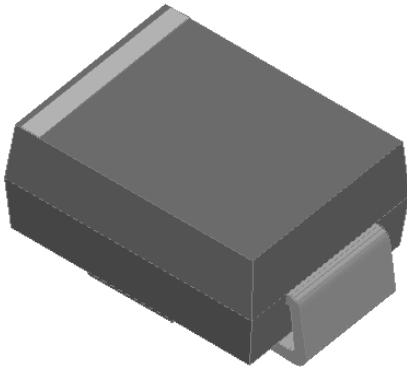


Surface Mount Super Fast Recovery Rectifier

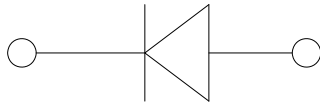


Features

- 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, automotive 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	MURS220Q	MURS240Q	MURS260Q
Device marking code			MURS220	MURS240	MURS260
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	2.0		
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	I_{FSM}	A	50		
Storage temperature	T_{stg}	°C	-55 ~ +150		
Junction temperature	T_j	°C	-55 ~ +150		



MURS220Q THRU MURS260Q

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	MURS220Q	MURS240Q	MURS260Q
Maximum instantaneous forward voltage	V _F	V	I _{FM} =2.0A	0.92	1.25	
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	25	50	
Maximum DC reverse current at rated DC blocking voltage	I _R	μA	T _j =25°C	5.0		
			T _j =125°C	50		
Typical junction capacitance	C _j	pF	V _R =4V, f=1 MHz	26	25	22

■Dynamic Characteristics

◆ MURS220Q

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 V _{RM} =30V	-	30	-
			T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =100V	-	26	-
			T _j =125°C		-	32	-
Peak recovery current	I _{RRM}	A	T _j =25°C		-	3.4	-
			T _j =125°C		-	5.7	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C		-	43	-
			T _j =125°C		-	89	-

◆ MURS240Q

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 V _{RM} =30V	-	53	-
			T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =200V	-	37	-
			T _j =125°C		-	58	-
Peak recovery current	I _{RRM}	A	T _j =25°C		-	5.2	-
			T _j =125°C		-	7.7	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C		-	96.6	-
			T _j =125°C		-	219.1	-

◆ MURS260Q

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 V _{RM} =30V	-	50	-
			T _j =25°C	I _F =2A di/dt=-200A/us V _{RM} =400V	-	42	-
			T _j =125°C		-	63	-
Peak recovery current	I _{RRM}	A	T _j =25°C		-	5.2	-
			T _j =125°C		-	7.4	-
Reverse recovery charge	Q _{rr}	nC	T _j =25°C		-	106.3	-
			T _j =125°C		-	231.7	-



MURS220Q THRU MURS260Q

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	MURS220Q	MURS240Q	MURS260Q
Typical Thermal resistance	$R_{\theta JA}^{(1)}$	$^{\circ}\text{C/W}$	75		
	$R_{\theta JL}^{(1)}$		25		

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)

Figure.1: I_O - T_L Curve

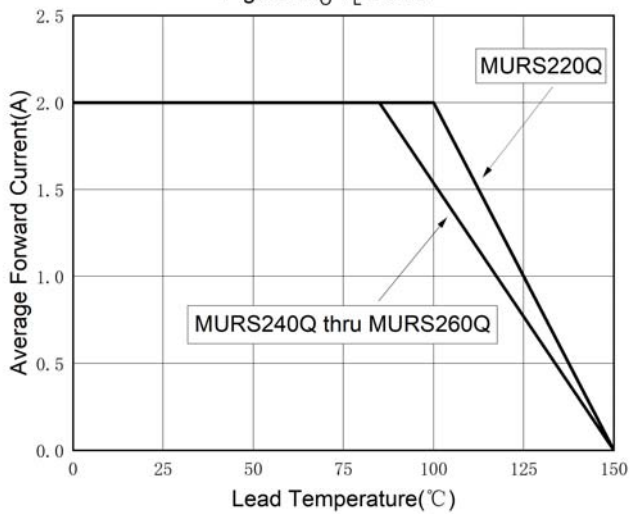


Fig.2: Forward Surge Current Capability

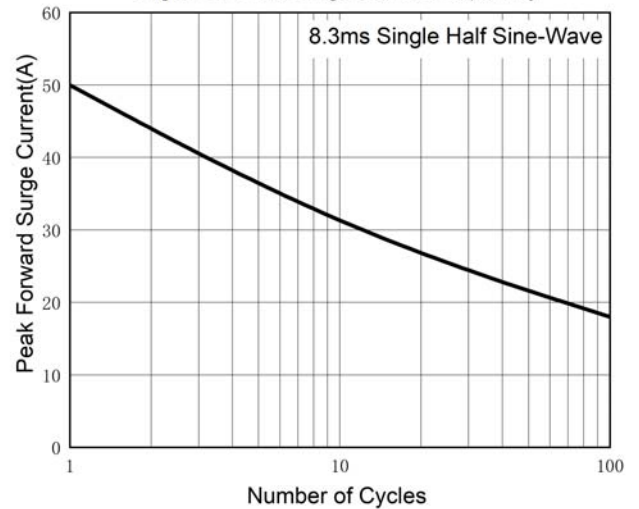


Fig.3: Typical Instantaneous Forward Characteristics

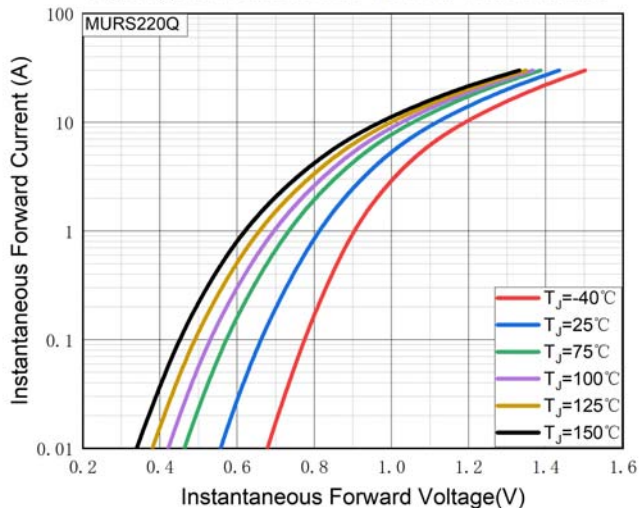
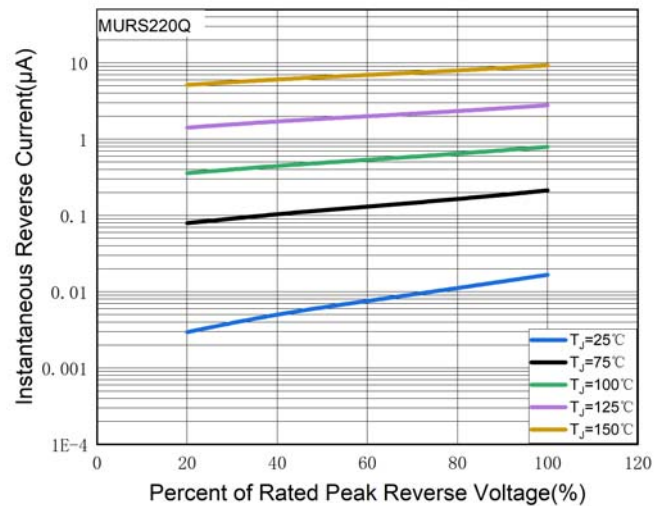


Fig.4: Typical Reverse Leakage Characteristics





MURS220Q THRU MURS260Q

Fig.5: Typical Instantaneous Forward Characteristics

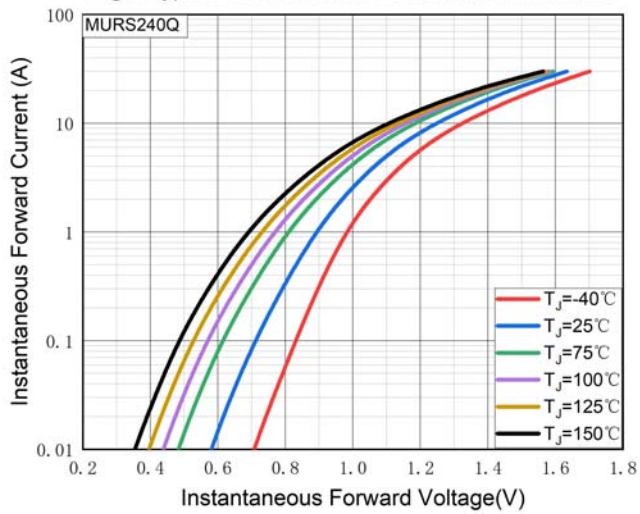


Fig.6: Typical Reverse Leakage Characteristics

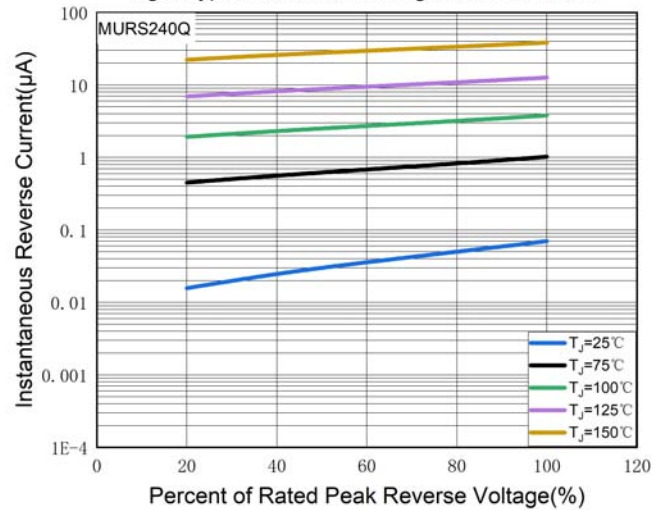


Fig.7: Typical Instantaneous Forward Characteristics

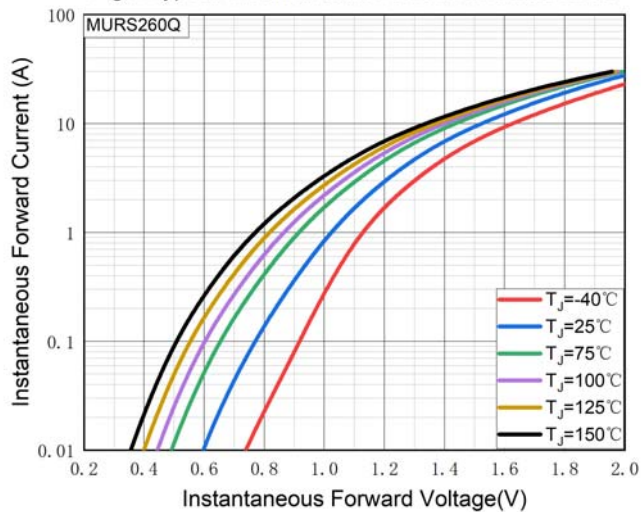


Fig.8: Typical Reverse Leakage Characteristics

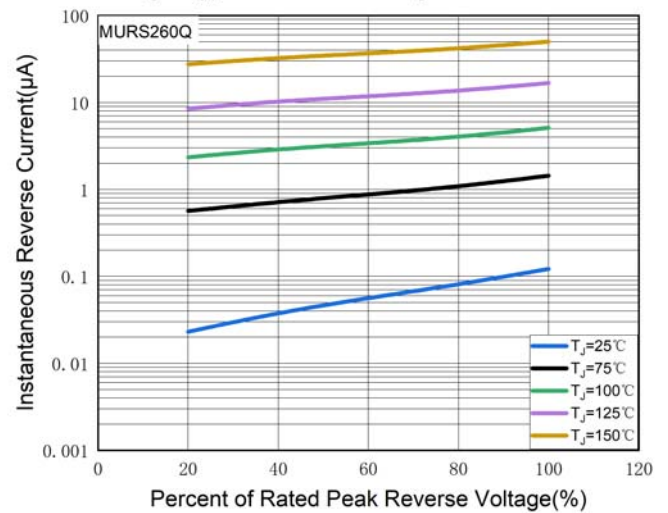
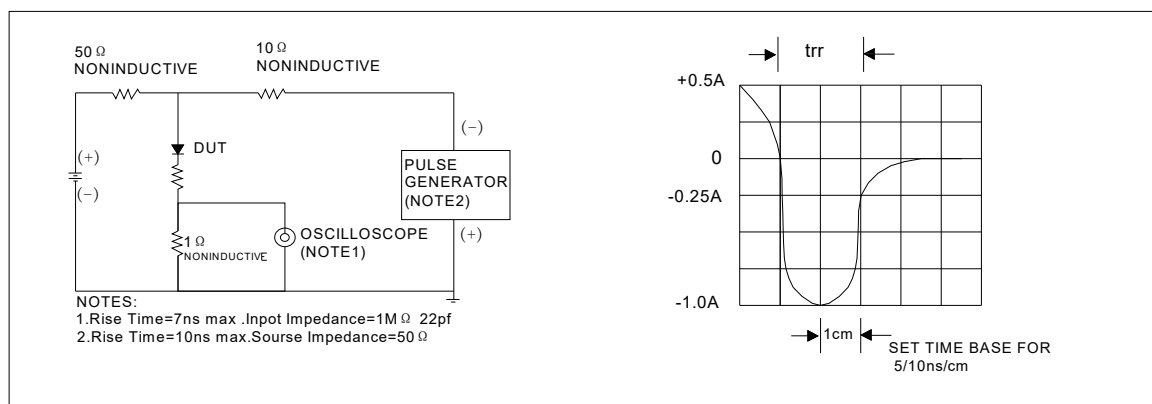


FIG.9: Diagram of circuit and Testing wave form of reverse recovery time



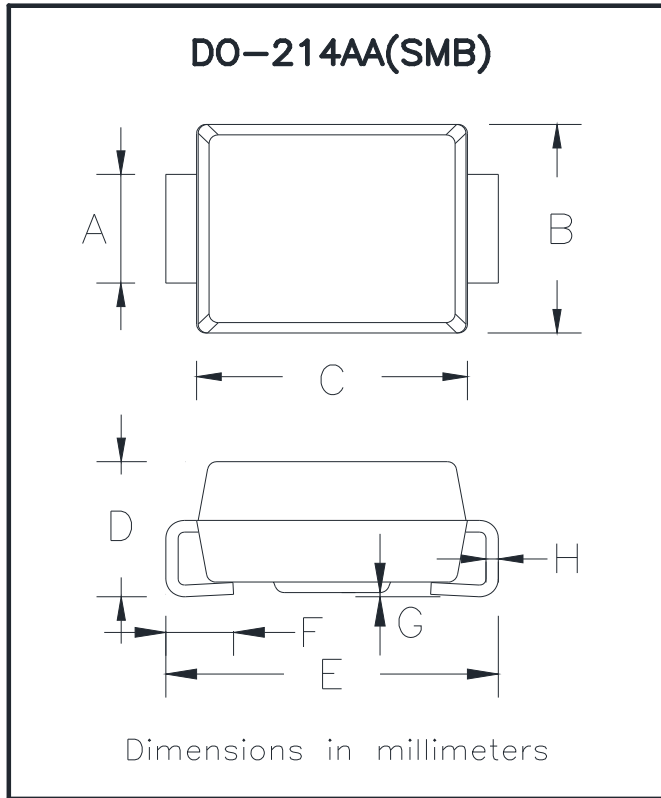


MURS220Q THRU MURS260Q

■ Ordering Information (Example)

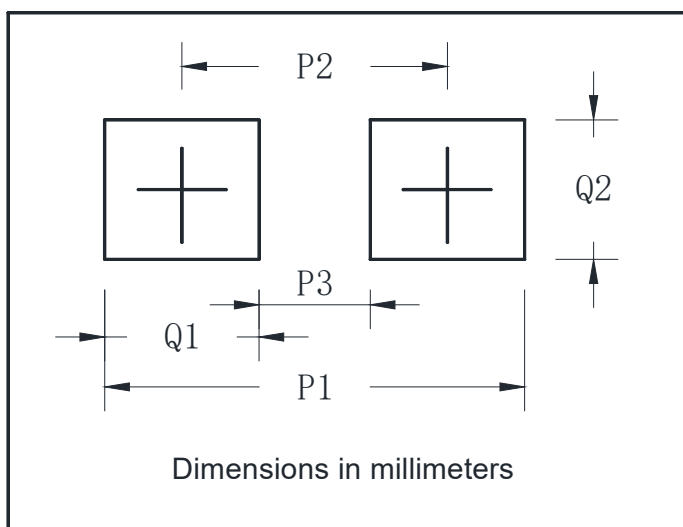
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MURS220Q-MURS260Q	F1	Approximate 0.1003	3000	48000	13" reel

■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.05	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.05	0.20
H	0.15	0.31

■ Suggested pad layout



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



MURS220Q THRU MURS260Q

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser printing
3. XXXXXXXX is marking code, like MURS260Q marking code is MURS260.
4. Body color: Black
5. YWW is date code, "Y" is year. "WW" is week.

For instance:

The 17th week of 2025, date code is 517

The 17th week of 2026, date code is 617



MURS220Q THRU MURS260Q

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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 which 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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