

MURS110 THRU MURS1100

SURFACE MOUNT FAST RECOVERY RECTIFIER

SMA Surface Mount Fast Recovery Rectifier

Features

- Low profile package
- Ideal for automated placement
- Glass passivated pallet chip junction
- Super fast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability

Applications

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

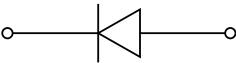
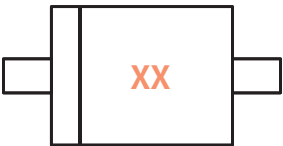
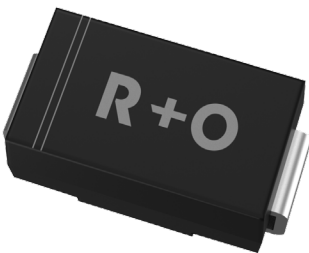
Mechanical Data

- Case: DO-214AC(SMA)
- Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

Reverse Voltage
100-1000 V
Forward Current
1 Ampere

DO-214AC(SMA)



Maximum Ratings (Ta=25°C Unless otherwise specified)

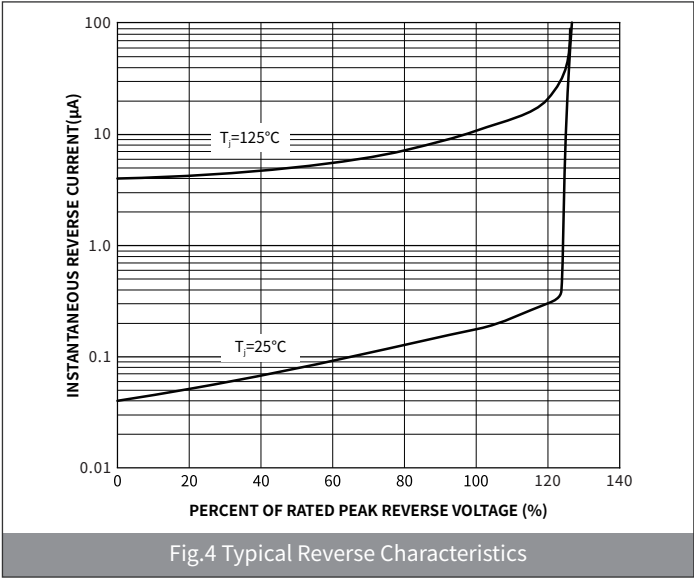
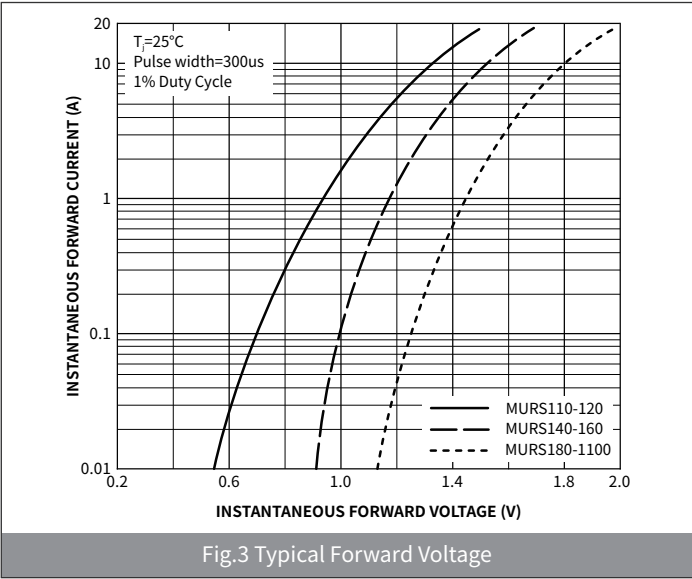
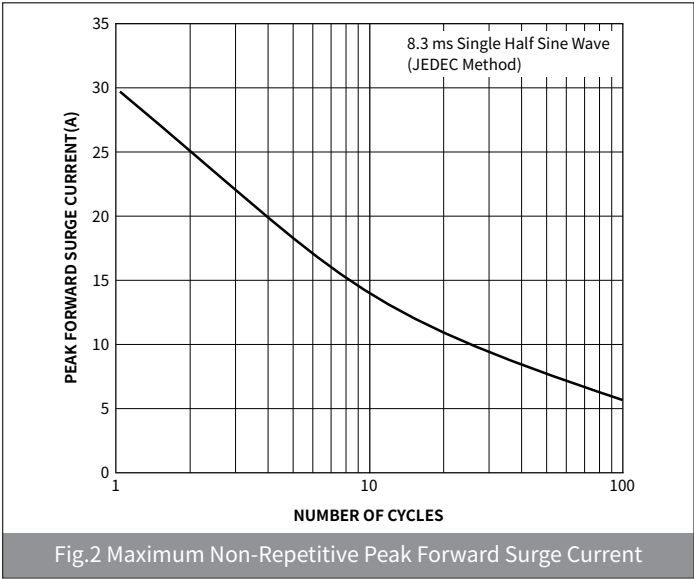
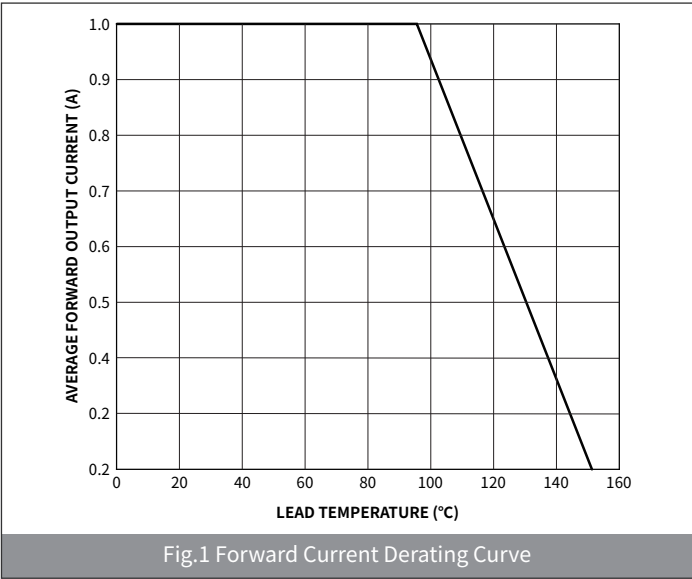
PARAMETER	SYMBOL	UNIT	MURS110	MURS120	MURS140	MURS160	MURS180	MURS1100
Device marking code			MURS110	MURS120	MURS140	MURS160	MURS180	MURS1100
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @ 60Hz sinewave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	1.0					
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	30.0					
Storage temperature	T_{stg}	°C	-55 ~+150					
Junction temperature	T_j	°C	-55 ~+150					
Typical Thermal Resistance	$R_{\theta J-A}^{(1)}$	°C /W	80					
	$R_{\theta J-L}^{(1)}$	°C /W	22					

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

● Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	MURS110	MURS120	MURS140	MURS160	MURS180	MURS1100
Maximum instantaneous forward voltage	$I_F=1.0A$	V_F	V	0.95		1.28		1.85	
Maximum reverse recovery time	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$	T_{rr}	ns	45		50		75	
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^{\circ}C$	I_{R1}	μA	5.0					
	$V_R=V_{DC}, T_A=125^{\circ}C$	I_{R2}		500					
Typical junction capacitance	4.0V DC, 1MHz	C_J	pF	20					

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



MURS110 THRU MURS1100

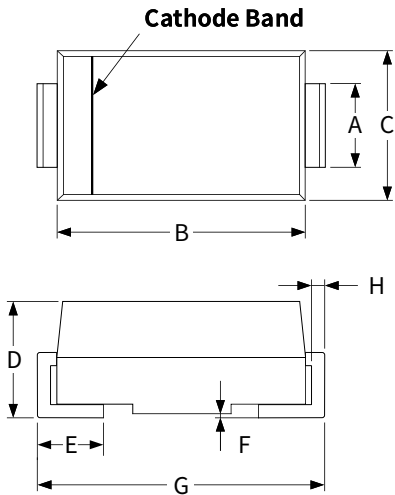
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● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMA	R2	0.07	5000	10000	80000	11"
SMA	R3	0.07	7500	15000	120000	13"

● Package Outline Dimensions (SMA/DO-214AC)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.25	1.65	0.049	0.065
B	3.95	4.65	0.156	0.183
C	2.35	2.85	0.093	0.112
D	1.98	2.41	0.078	0.095
E	0.76	1.52	0.030	0.060
F	-	0.203	-	0.008
G	4.70	5.30	0.185	0.209
H	0.15	0.31	0.006	0.012



● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	1.70	-	0.067	-
J	2.10	-	0.082	-
K	-	2.30	-	0.090

