MURS110 THRU MURS1100

SMA Surface Mount Fast Recovery Rectifier

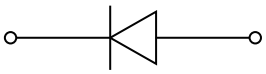
MAOYUANWEI semiconductor

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

Reverse Voltage
100-1000 V
Forward Current
1 Ampere

DO-214AC(SMA)



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: SOD-523
  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

Maximum Ratings (Ta=25℃ 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 (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 x5.0 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	
Maxinum reverse recovery time	I_F=0.5A,I_R=1.0A,I_{rr}=0.25A	T_{rr}	ns	45		50		75	
Maximum DC reverse currentat rated DC blocking voltage	V_R=V_{DC}, T_A=25°C	I_{R1}	μA	5.0					
	V_R=V_{DC}, T_A=125°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)

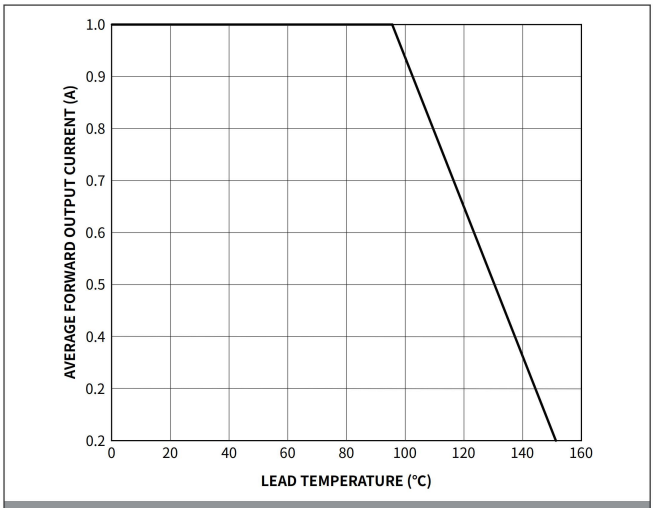


Fig.1 Forward Current Derating Curve

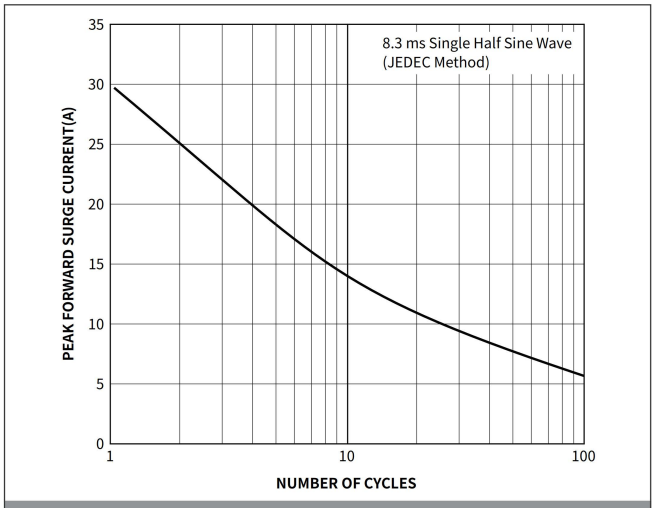


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

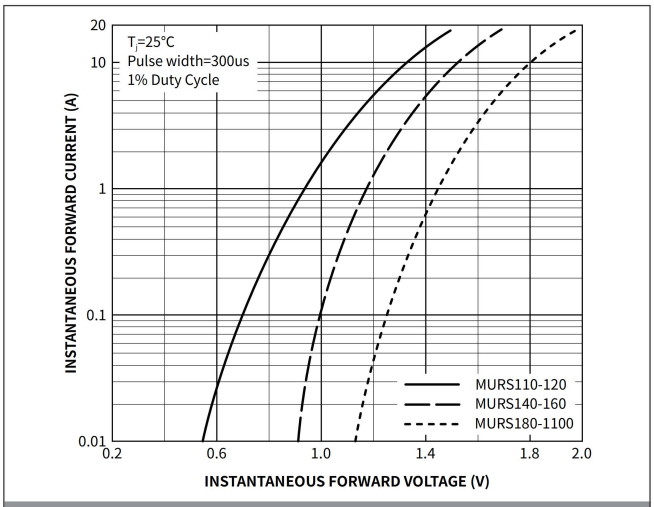


Fig.3 Typical Forward Voltage

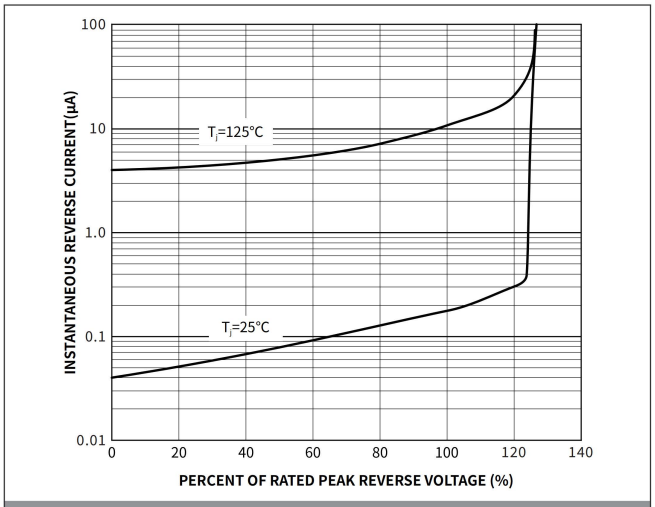
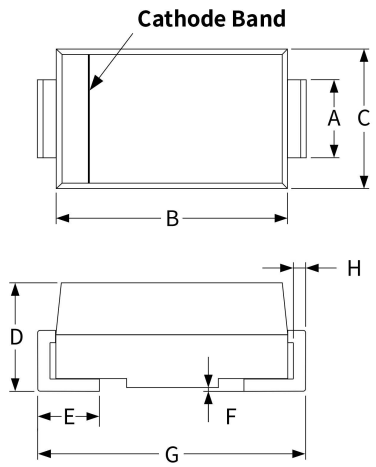


Fig.4 Typical Reverse Characteristics

Ordering Information

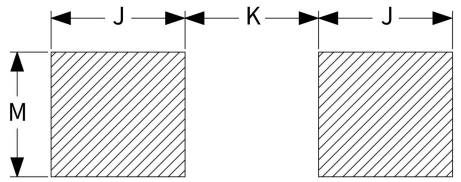
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMA	R2	0.07	5000	10000	80000	11''
SMA	R3	0.07	7500	15000	120000	13''

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