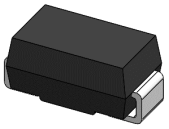
1A,400 - 600V Ultrafast Rectifiers

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260℃/10 seconds

RoHS
COMPLIANT



SMA(DO-214AC)

Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings & Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	MURS140A	MURS160A	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	400	600	V
Maximum RMS voltage	V_{RMS}	280	420	V
Maximum DC blocking voltage	V_{DC}	400	600	V
Maximum average forward rectified current	$I_{F(AV)}$	1		A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}	35		A
Operating junction temperature range	T_J	-55 to +175		°C
Storage temperature range	T_{STG}	-55 to +175		°C

Thermal-Mechanical Specifications (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	90	°C /W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	20	°C /W
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	25	°C /W

Electrical Specifications(T_A=25℃ unless otherwise noted)					
Parameter	**Symbol**	**Test Conditions**	**MURS140A**	**MURS160A**	**Unit**
Maximum forward drop voltage	V_F	I_F=1A T_A=25℃	1.30		V
		I_F=1A T_A=125℃	1.10		
Maximum reverse leakage current @V_R	I_R	T_J =25℃	2		uA
		T_J =150℃	100		
Typical junction capacitance	C_J	4.0V 1 MHZ	13		pF
Maximum reverse recovery time	t_{rr}	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	50		nS

Note：

1. Mounted on copper pad area of 0.2x0.2” (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

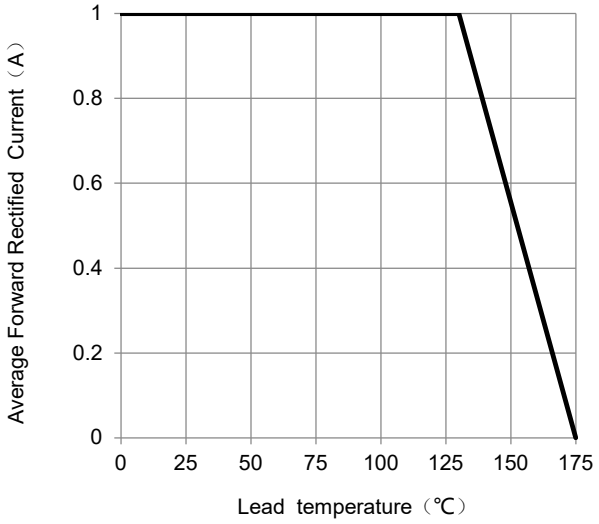


Fig.1 –Forward Current Derating Curve

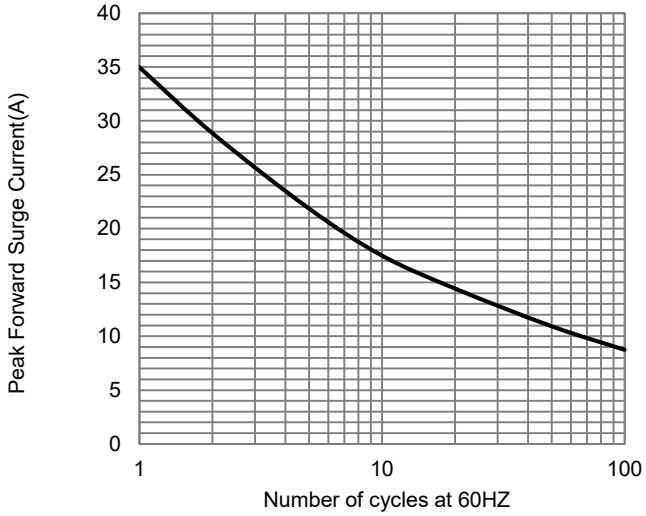


Fig.2 – Maximum Non-Repetitive Surge Current

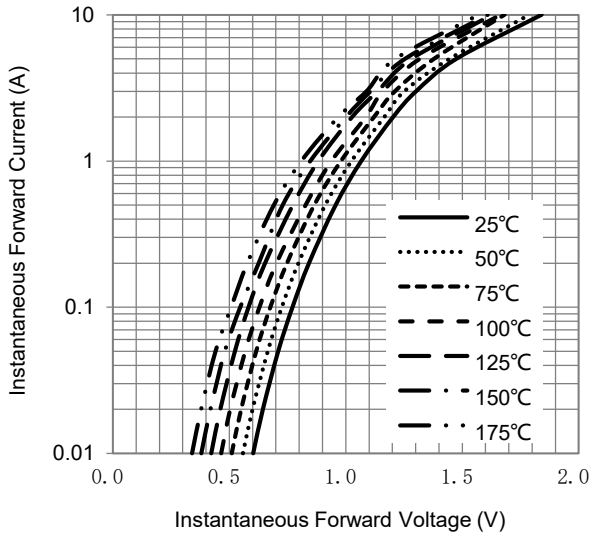


Fig.3 –Typical Forward Voltage Characteristics

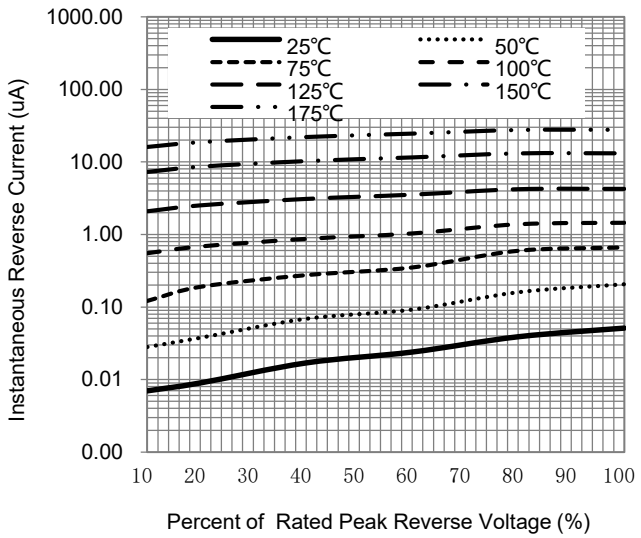


Fig.4 –Typical Reverse Current Characteristics

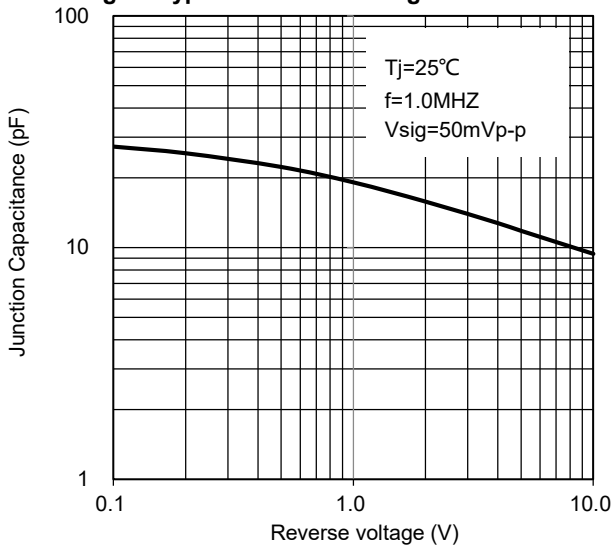
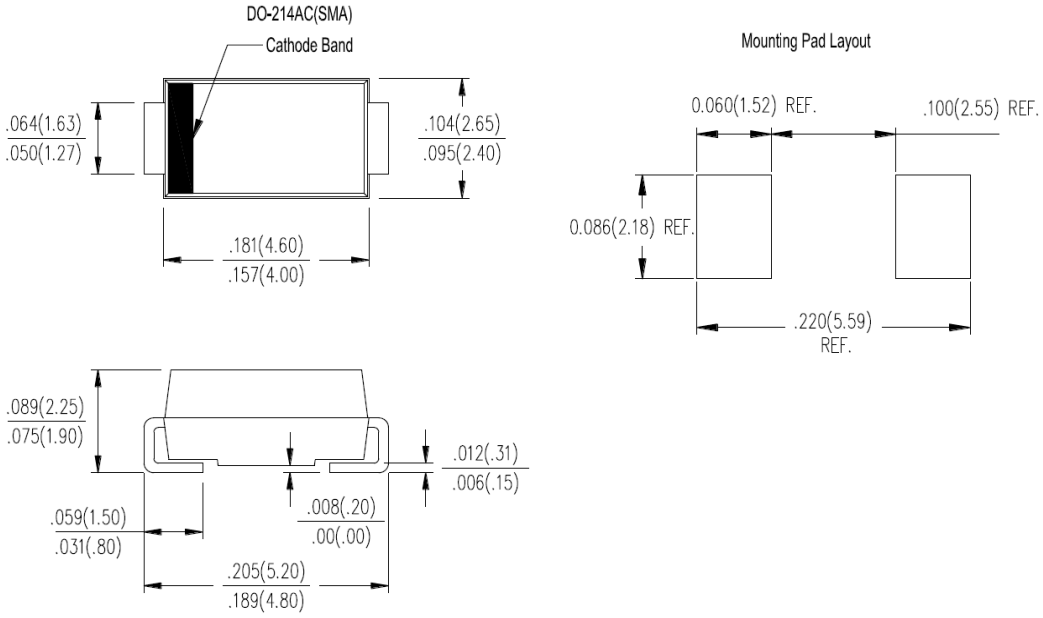


Fig.5 –Typical Junction Capacitance

Package Outline Dimensions

in inches (millimeters)

SMA (DO-214AC)



Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.08.09	Modify document format
Rev.C	2023.10.19	Modify document format

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