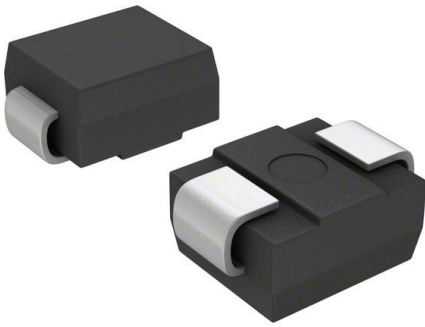


MURS140-M3/52T Datasheet

www.digi-electronics.com



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	MURS140-M3/52T-DG
Manufacturer	Vishay General Semiconductor - Diodes Division
Manufacturer Product Number	MURS140-M3/52T
Description	DIODE GEN PURP 400V 1A DO214AA
Detailed Description	Diode 400 V 1A Surface Mount DO-214AA (SMB)

This model MURS140-M3/52T is available at DiGi Electronics.

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Purchase and inquiry

Manufacturer Product Number:

MURS140-M3/52T

Series:

-

Technology:

Standard

Current - Average Rectified (Io):

1A

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Current - Reverse Leakage @ Vr:

5 μ A @ 400 V

Mounting Type:

Surface Mount

Supplier Device Package:

DO-214AA (SMB)

Base Product Number:

MURS140

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

400 V

Voltage - Forward (Vf) (Max) @ If:

1.25 V @ 1 A

Reverse Recovery Time (trr):

75 ns

Capacitance @ Vr, F:

-

Package / Case:

DO-214AA, SMB

Operating Temperature - Junction:

-65°C ~ 175°C

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

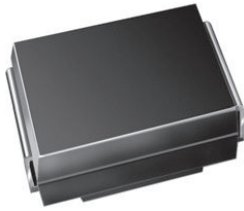
Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

Surface-Mount Ultrafast Plastic Rectifier


SMB (DO-214AA)

Cathode Anode

FEATURES

- Glass passivated pellet chip junction
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
 COMPLIANT
 HALOGEN
FREE

LINKS TO ADDITIONAL RESOURCES


[3D Models](#)

TYPICAL APPLICATIONS

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

MECHANICAL DATA

Case: SMB (DO-214AA)

Molding compound meets UL 94 V-0 flammability rating
 Base P/N-M3 - halogen-free, RoHS-compliant, and commercial grade

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

M3 suffix meets JESD 201 class 2 whisker test

Polarity: color band denotes cathode end

PRIMARY CHARACTERISTICS

$I_{F(AV)}$	1.0 A
V_{RRM}	400 V, 600 V
I_{FSM}	35 A
t_{rr}	50 ns
V_F	1.05 V
$T_J \text{ max.}$	175 °C
Package	SMB (DO-214AA)
Circuit configuration	Single

MAXIMUM RATINGS ($T_A = 25\text{ °C}$ unless otherwise noted)

PARAMETER	SYMBOL	MURS140	MURS160	UNIT
Device marking code		MG	MJ	
Maximum repetitive peak reverse voltage	V_{RRM}	400	600	V
Working peak reverse voltage	V_{RWM}	400	600	V
Maximum DC blocking voltage	V_{DC}	400	600	V
Maximum average forward rectified current at (fig. 1)	$T_L = 150\text{ °C}$	1.0		A
	$T_L = 125\text{ °C}$	2.0		
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	35		A
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175		°C



ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)					
PARAMETER	TEST CONDITIONS	SYMBOL	MURS140	MURS160	UNIT
Maximum instantaneous forward voltage	$I_F = 1.0\text{ A}$	$T_J = 25\text{ }^\circ\text{C}$	1.25		V
		$T_J = 150\text{ }^\circ\text{C}$			
Maximum instantaneous reverse current at rated DC blocking voltage		$T_J = 25\text{ }^\circ\text{C}$	5.0		μA
		$T_J = 150\text{ }^\circ\text{C}$	150		
Maximum reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$		50		ns
	$I_F = 1.0\text{ A}, dI/dt = 50\text{ A}/\mu\text{s}, V_R = 30\text{ V}, I_{rr} = 10\% I_{RM}$		75		
Maximum forward recovery time	$I_F = 1.0\text{ A}, dI/dt = 100\text{ A}/\mu\text{s},$ recovery to 1.0 V		50		ns

Note

(1) Pulse test: $t_p = 300\text{ }\mu\text{s}$ pulse, duty cycle $\leq 2\%$

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)				
PARAMETER	SYMBOL	MURS140	MURS160	UNIT
Typical thermal resistance, junction to lead	$R_{\theta JL}$	13		$^\circ\text{C}/\text{W}$

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
MURS160-M3/52T	0.096	52T	750	7" diameter plastic tape and reel
MURS160-M3/5BT	0.096	5BT	3200	13" diameter plastic tape and reel



RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

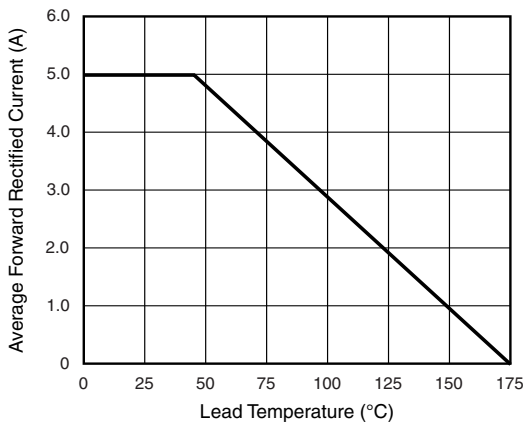


Fig. 1 - Forward Current Derating Curve

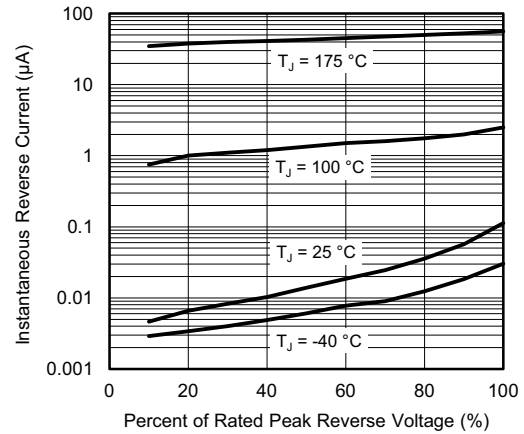


Fig. 4 - Typical Reverse Leakage Characteristics

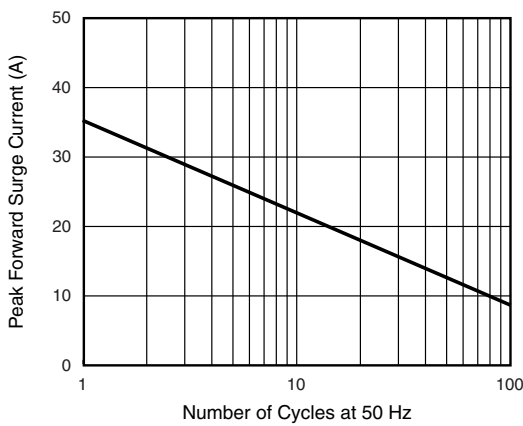


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

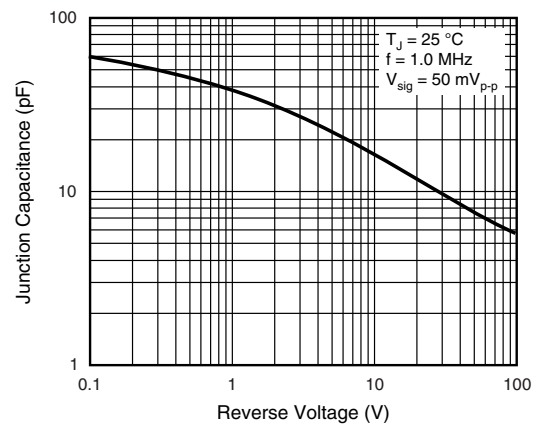


Fig. 5 - Typical Junction Capacitance

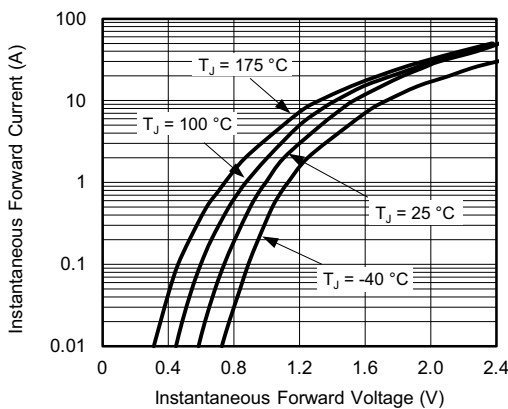
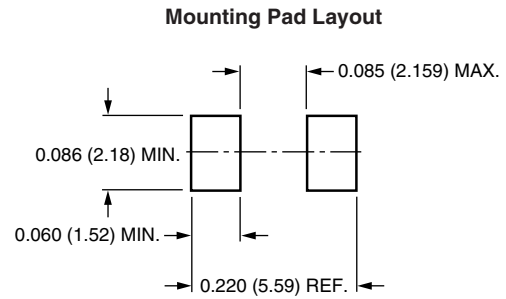
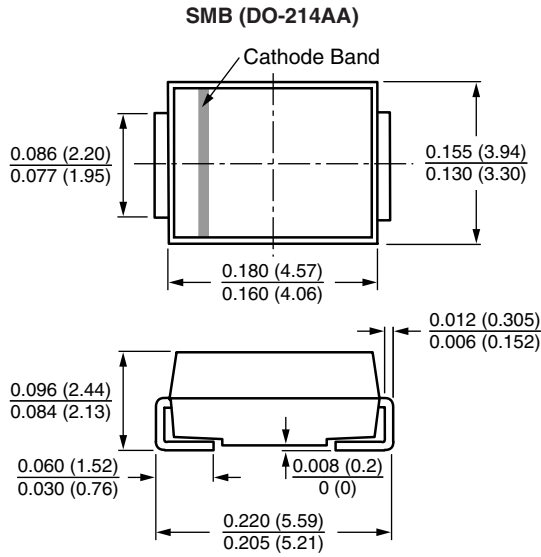


Fig. 3 - Typical Instantaneous Forward Characteristics



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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