

# MURC5J / MUR560M / MUR560S

## SUPERFAST RECOVERY RECTIFIERS

**Voltage**

**600 V**

**Current**

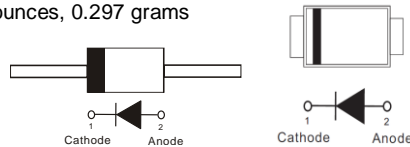
**5 A**

### Features

- Silicon epitaxial high-speed diodes
- Soft recovery characteristics
- Low forward voltage, high current capability
- Hermetically sealed.
- Low leakage
- High surge capacity
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### Mechanical Data

- Case: Molded plastic, SMC, DO-201AD, TO-252
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end
- SMC Approx. Weight: 0.0082 ounces, 0.2325 grams
- DO-201AD Approx. Weight: 0.04 ounces, 1.142 grams
- TO-252 Weight: 0.0104 ounces, 0.297 grams
- Marking: Part number



MUR560M DO-201AD



MURC5J SMC



MUR560S TO-252



### Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNIT
Maximum repetitive peak reverse voltage		$V_{RRM}$	600	V
Maximum rms voltage		$V_{RMS}$	420	V
Maximum dc blocking voltage		$V_R$	600	V
Maximum average forward current		$I_{F(AV)}$	5	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	SMC	$I_{FSM}$	110	A
	DO-201AD		110	
	TO-252		80	
Maximum forward voltage at 5A		$V_F$	1.3	V
Maximum dc reverse current at rated dc blocking voltage		$I_R$	5	$\mu\text{A}$
Maximum reverse recovery time	(Note 5)	$T_{RR}$	50	ns
Typical thermal resistance	SMC(Note 3)	$R_{\theta JA}$	125	$^{\circ}\text{C/W}$
	SMC(Note 1)	$R_{\theta JC}$	14	
	DO-201AD(Note 2)	$R_{\theta JL}$	24	
	TO-252(Note 4)	$R_{\theta JC}$	6.5	
Operating and storage temperature range		$T_J, T_{STG}$	-55 to +175	$^{\circ}\text{C}$

Note : 1. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area

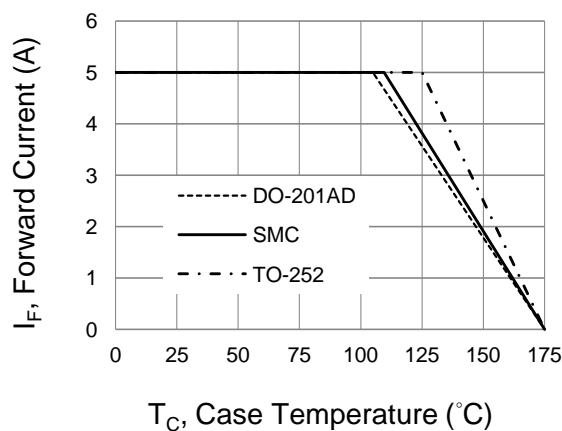
2. The testing condition of the thermal resistance (junction to lead) is based on 10 mm lead length between two 10cm x 10cm x 0.5mm copper pad

3. Mounted on a FR4 PCB, single-sided copper, mini pad

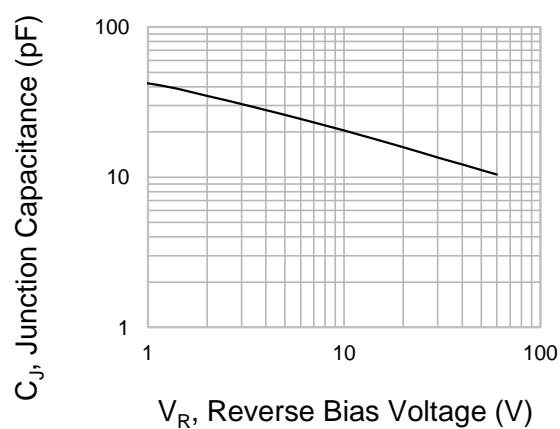
4. Mounted on 10cm x 10cm x 1mm copper pad area

5. Reverse Recovery Test Conditions :  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ , Recover to 0.25A

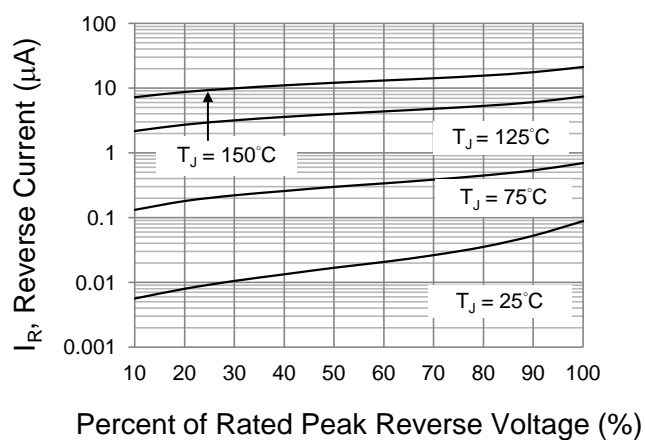
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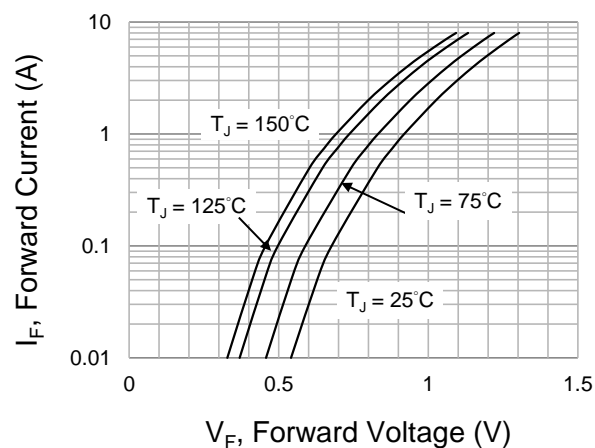
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

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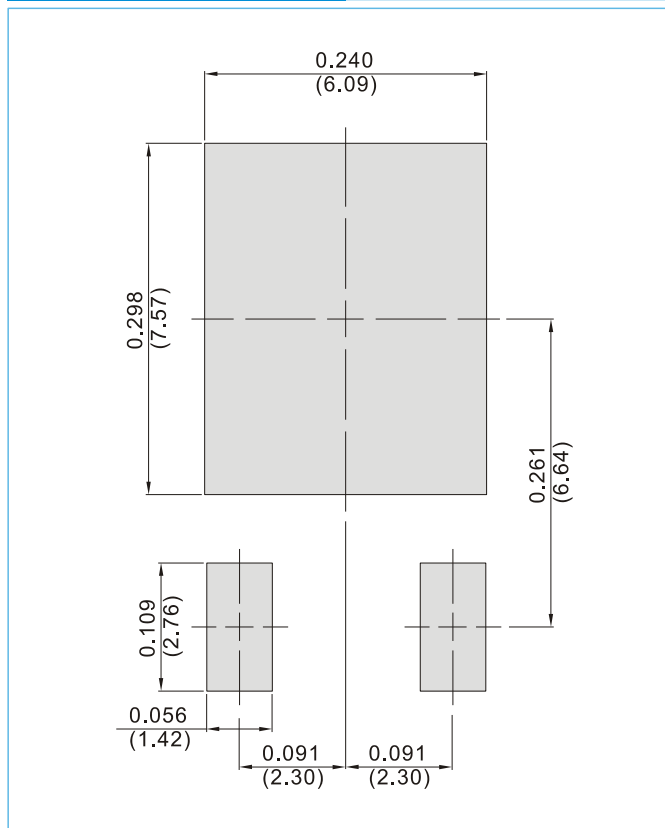
## PART NO PACKING CODE VERSION

PART NO PACKING CODE	Package Type	Packing type	Marking	Version
MUR560M_AY_00001	DO-201AD	1.25K pcs / TB 52mm	MUR560M	Halogen free
MUR560S_L2_00001	TO-252	3K pcs / 13" reel	MUR560S	Halogen free
MURC5J_R1_00001	SMC	0.5K pcs / 7" reel	MURC5J	Halogen free

## MOUNTING PAD LAYOUT

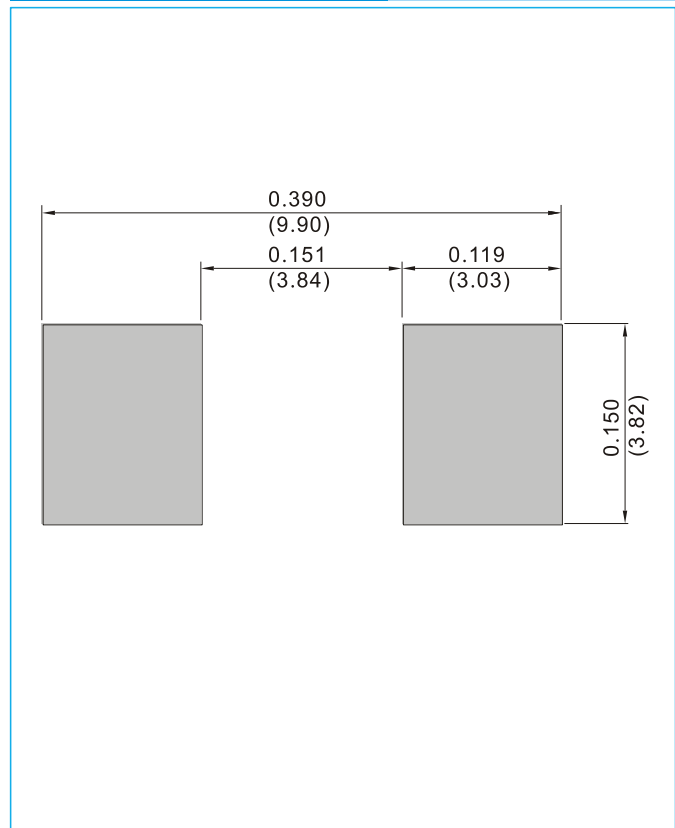
### TO-252

Unit : inch(mm)



### SMC / DO-214AB

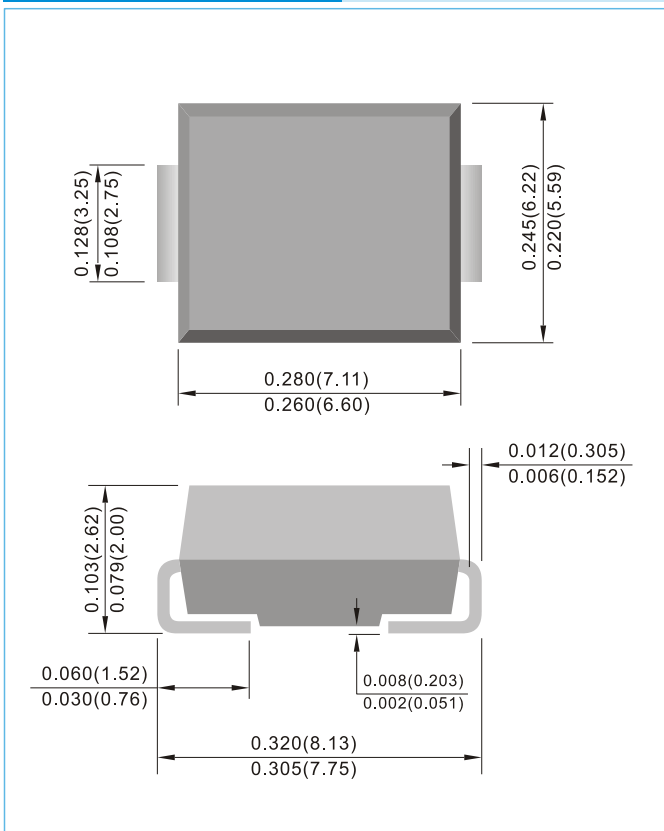
Unit : inch(mm)



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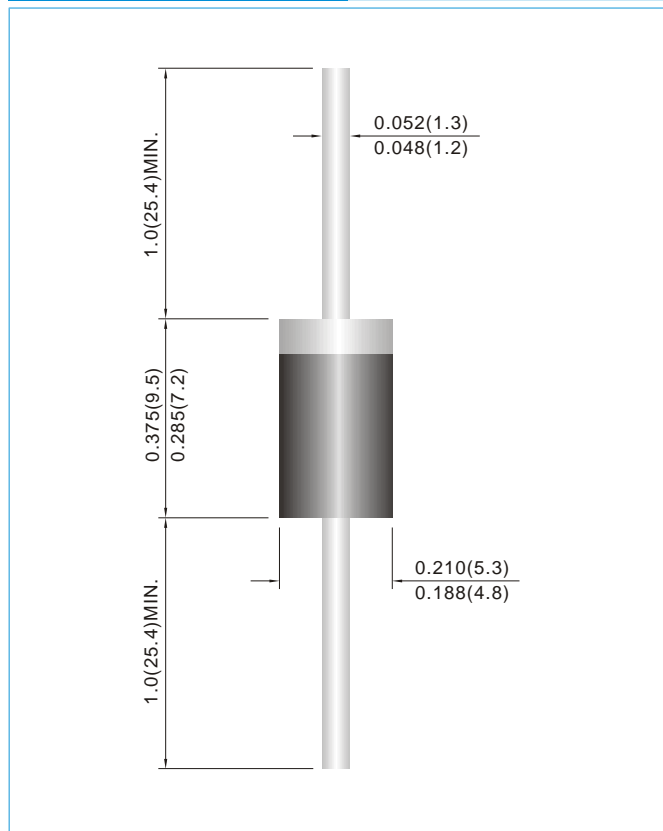
## SMC / DO-214AB

Unit : inch(mm)



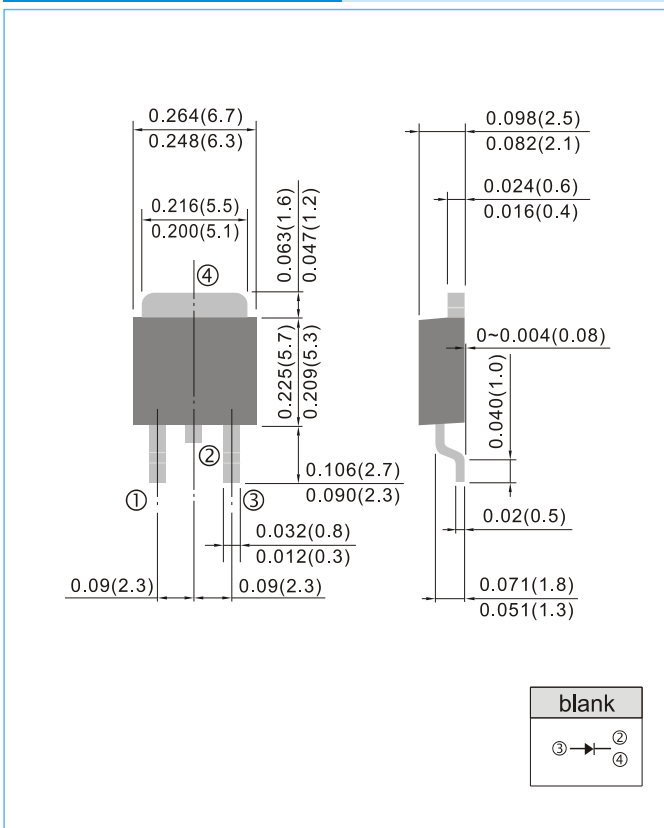
## DO-201AD

Unit : inch(mm)



## TO-252

Unit : inch(mm)





## **MURC5J / MUR560M / MUR560S**

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