



# MURA1J / MURB1J / MUR160K

## SUPERFAST RECOVERY RECTIFIERS

**Voltage**

**600 V**

**Current**

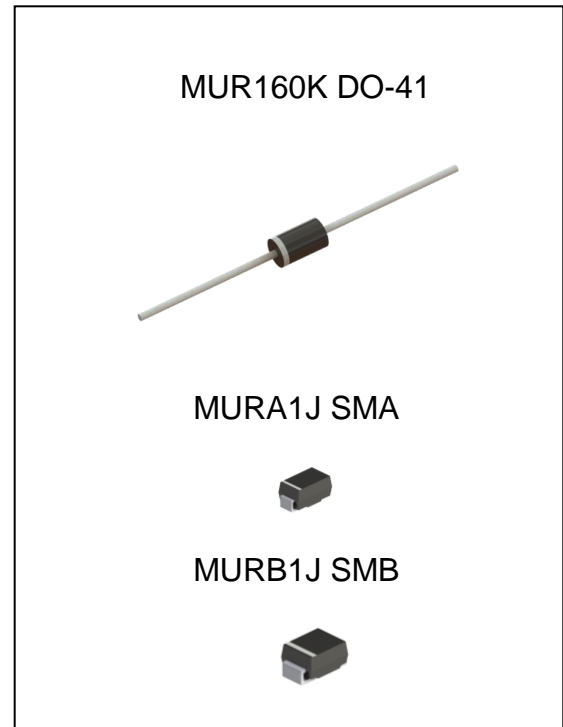
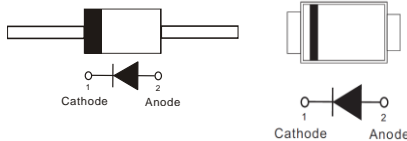
**1 A**

### Features

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Hermetically sealed.
- Low leakage
- High surge capacity
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard (SMA)(SMB)

### Mechanical Data

- Case: Molded plastic, SMA, SMB, DO-41
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end
- SMA Approx. Weight: 0.0239 ounces, 0.068 grams
- SMB Approx. Weight: 0.0032 ounces, 0.092 grams
- DO-41 Approx. Weight: 0.012 ounces, 0.034 grams
- Marking: Part number



### 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	$I_{F(AV)}$	1	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30	A
Maximum forward voltage at 1A	$V_F$	1.25	V
Maximum dc reverse current at rated dc blocking voltage	$I_R$	5	$\mu\text{A}$
Operating and storage temperature range	$T_J, T_{STG}$	-55 to +175	$^{\circ}\text{C}$



# MURA1J / MURB1J / MUR160K

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

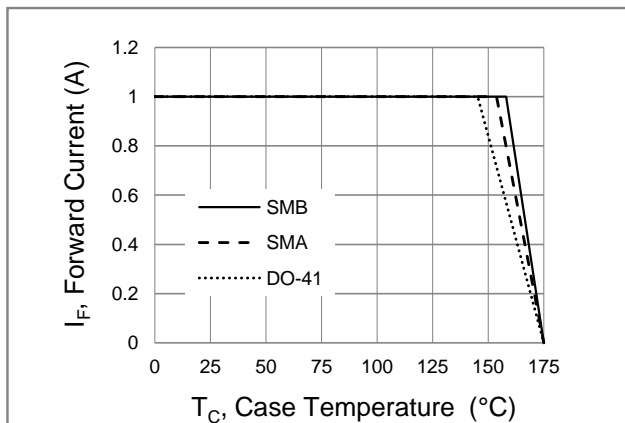
PARAMETER		SYMBOL	LIMIT	UNIT
Maximum reverse recovery time	(Note 4)	$T_{RR}$	50	ns
Typical thermal resistance	SMA(Note 3)	$R_{\theta JA}$	150	$^{\circ}\text{C/W}$
	SMB(Note 3)	$R_{\theta JA}$	135	
	SMA(Note 1)	$R_{\theta JC}$	25	
	SMB(Note 1)	$R_{\theta JC}$	20	
	DO-41(Note 2)	$R_{\theta JL}$	55	

Note : 1. Mounted on a FR4 PCB, single-sided copper, with  $100\text{cm}^2$  copper pad area

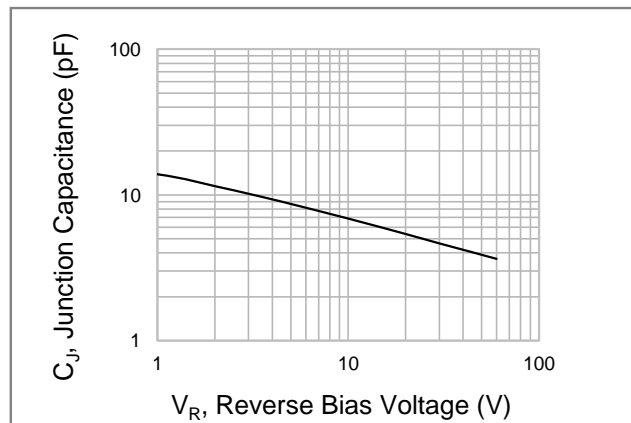
2. The testing condition of the thermal resistance (junction to lead) is based on 10 mm lead length between two 10cm x 10cm FR4 PCB single-sided copper pad

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

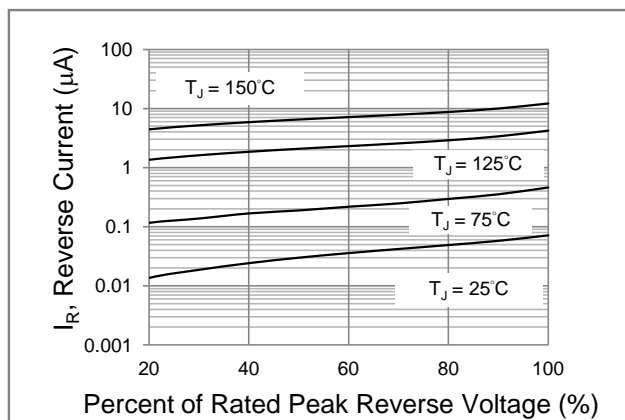
4. Reverse Recovery Test Conditions :  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ , Recover to 0.25A



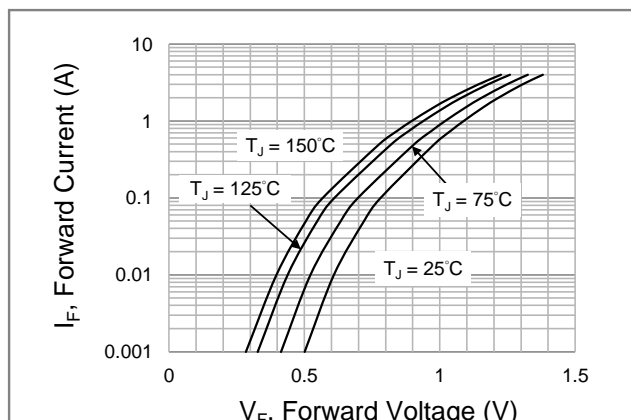
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



# MURA1J / MURB1J / MUR160K

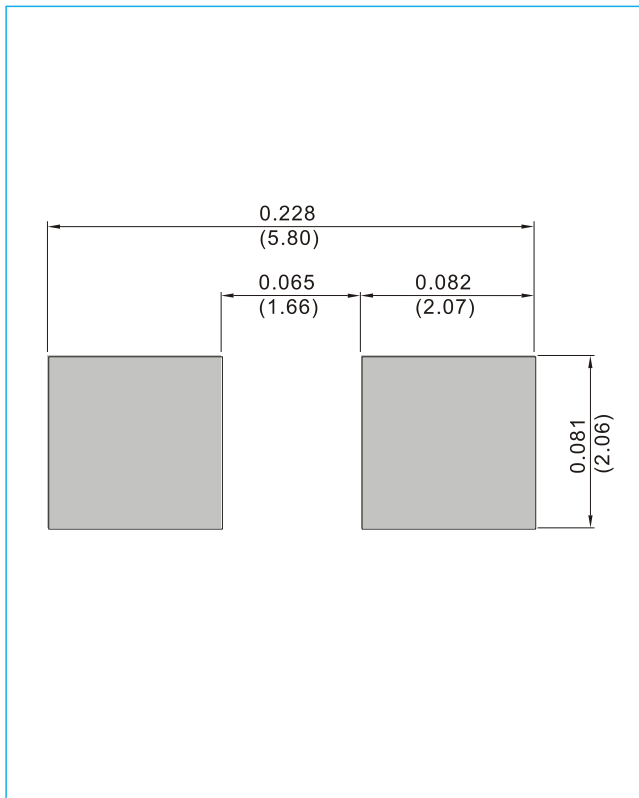
## PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing type	Marking	Version
MUR160K_AY_00001	DO-41	5K pcs/ TB 52mm	MUR160K	Halogen free
MUR160K_AY_10001	DO-41	5K pcs/ TB 52mm	MUR160K	RoHS
MURA1J_R1_00001	SMA	1.8K pcs / 7" reel	MURA1J	Halogen free
MURB1J_R1_00001	SMB	0.8K pcs / 7" reel	MURB1J	Halogen free

## MOUNTING PAD LAYOUT

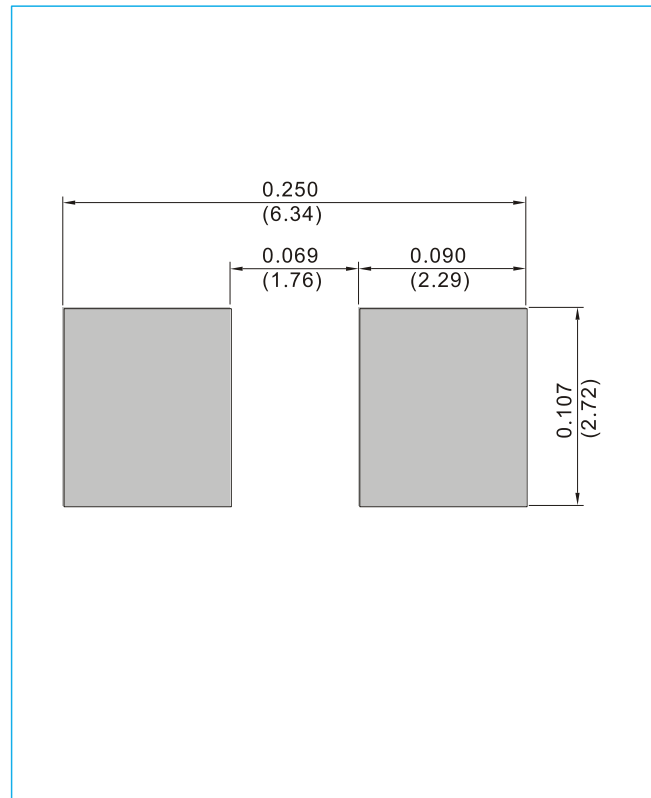
**SMA / DO-214AC**

Unit : inch(mm)



**SMB / DO-214AA**

Unit : inch(mm)

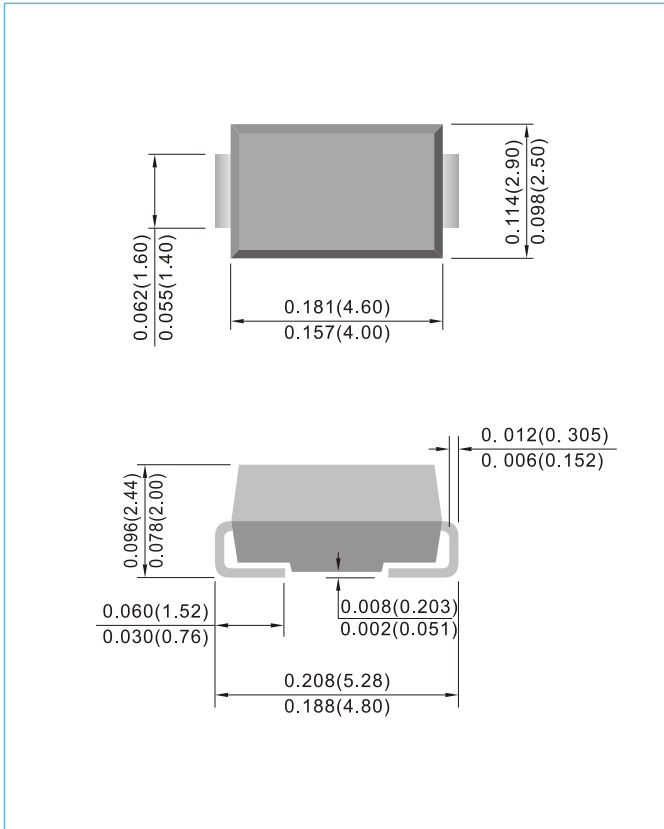




# MURA1J / MURB1J / MUR160K

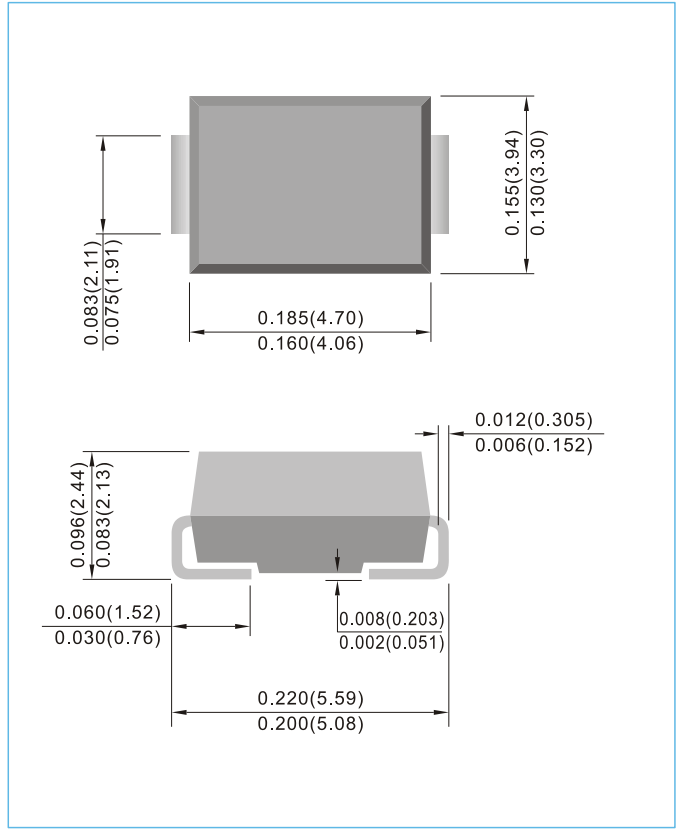
## SMA / DO-214AC

Unit : inch(mm)



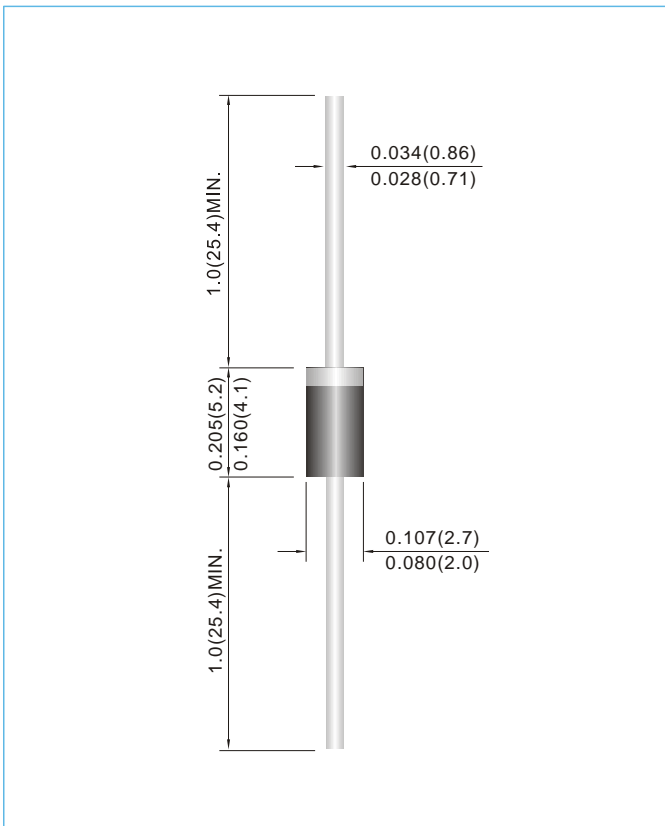
## SMB / DO-214AA

Unit : inch(mm)



## DO-41

Unit : inch(mm)





## MURA1J / MURB1J / MUR160K

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.