

# XBF20A40S-G

ETR42004-002

## 2.0A Fast Recovery Rectifier

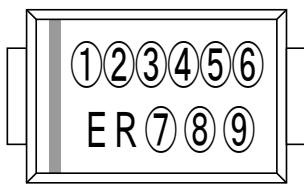
### FEATURES

- Forward Current :  $I_{F(AV)}=2.0A$
- Reverse Recovery Time :  $t_{rr}=35ns$  (TYP.)
- Environmentally Friendly : EU RoHS Compliant

### APPLICATIONS

- LED lighting
- Power supply module
- AC adapter, Battery charger

### MARKING



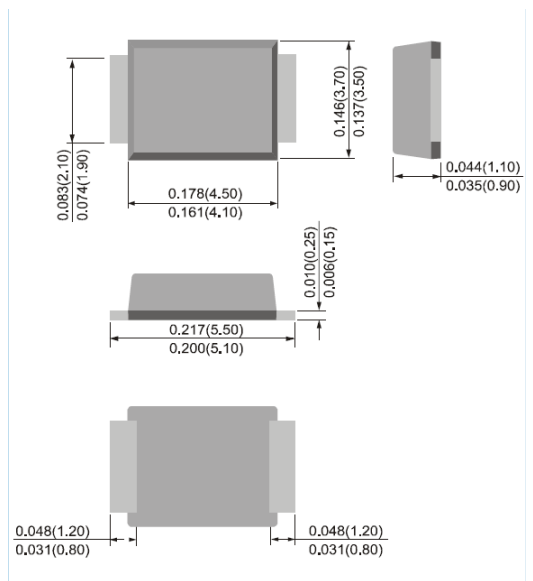
①②③④⑤⑥ : Control Number  
⑦⑧⑨ : Marking Code



### PACKAGING INFORMATION

● SMBF

Unit : inch (mm)



### ABSOLUTE MAXIMUM RATINGS

$T_a=25^\circ C$

PARAMETER	SYMBOL	RATINGS	UNITS
Repetitive Peak Reverse Voltage	$V_{RM}$	400	V
RMS Voltage	$V_{RMS}$	280	V
Reverse Voltage (DC)	$V_R$	400	V
Forward Current (Average)	$I_{F(AV)}$	2	A
Non Continuous Forward Surge Current <sup>(*)</sup>	$I_{FSM}$	50	A
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55~ +150	$^\circ C$

<sup>(\*)</sup> 60Hz single half sine wave

### ELECTRICAL CHARACTERISTICS

$T_a=25^\circ C$

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN.	TYP.	MAX.	
Forward Voltage	$V_F$	$I_F=2A$ , Pulse measurement	-	-	1.25	V
Reverse Current	$I_R$	$V_R=V_{RM}$	-	-	1	$\mu A$
Terminal Capacitance	$C_t$	$V_R=4V$ , $f=1MHz$	-	20	-	pF
Reverse Recovery Time	$t_{rr}$	$I_F=0.5A$ , $I_R=1A$ , $i_{rr}=0.25A$	-	-	35	ns

## ■ PRODUCT NAME

PRODUCT NAME	PACKAGE	ORDER UNIT	MARKING CODE
XBF20A40S-G *	SMBF	10,000pcs / 2Reels (13 inch)	2GF

\* The "-G" suffix denotes Halogen and Antimony free as well as being fully EU RoHS compliant.

\* However, the product uses high-melting-point solder paste and lead glass, both of which are not compliant with EU RoHS.

## ■ NOTES ON USE

1. Please use this IC within the absolute maximum ratings.

Even within the ratings, in case of high load use continuously such as high temperature, high voltage, high current and thermal stress may cause reliability degradation of the IC.

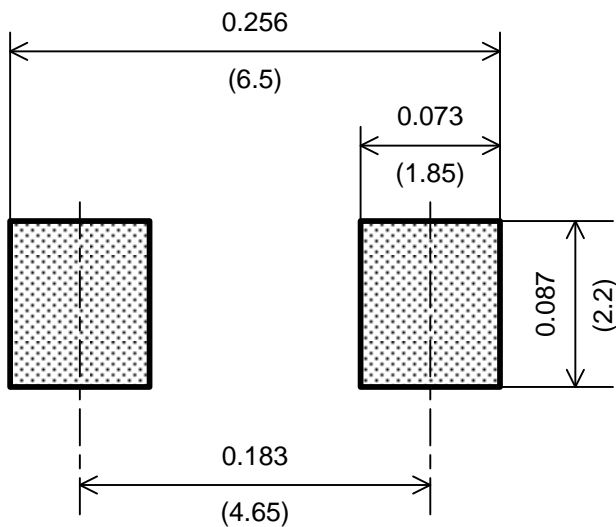
2. Torex places an importance on improving our products and their reliability.

We request that users incorporate fail-safe designs and post-aging protection treatment when using Torex products in their systems.

## ■ REFERENCE PATTERN LAYOUT

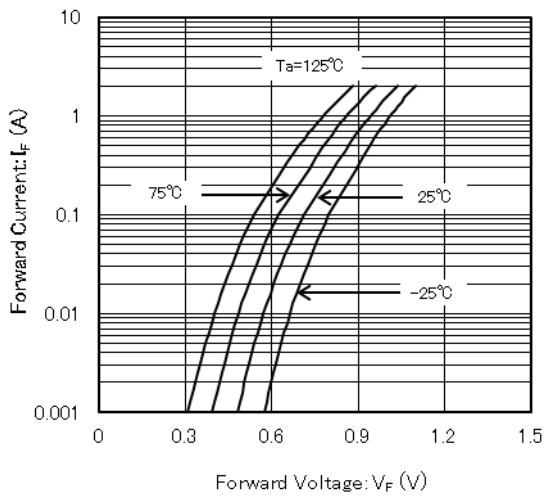
● SMBF

Unit : inch (mm)

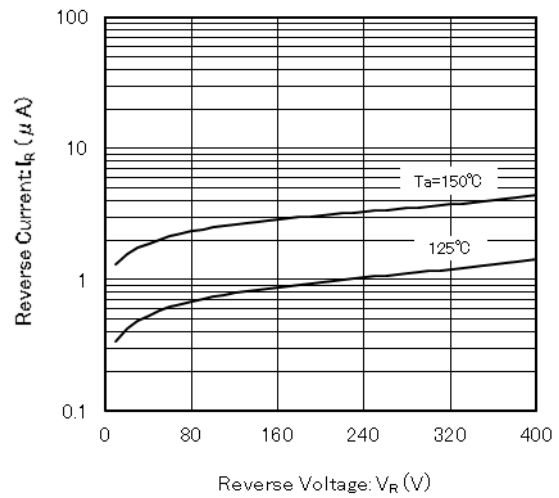


## ■ TYPICAL PERFORMANCE CHARACTERISTICS

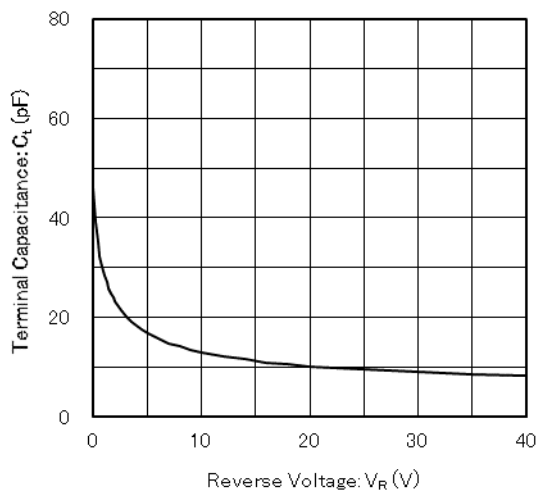
(1) Forward Current vs. Forward Voltage



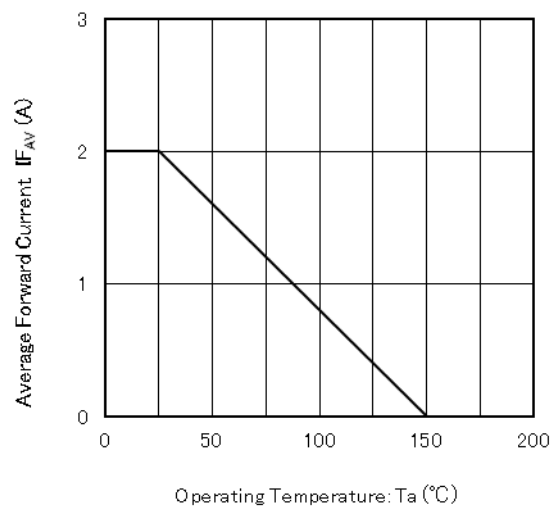
(2) Reverse Current vs. Reverse Voltage



(3) Terminal Capacitance vs. Reverse Voltage



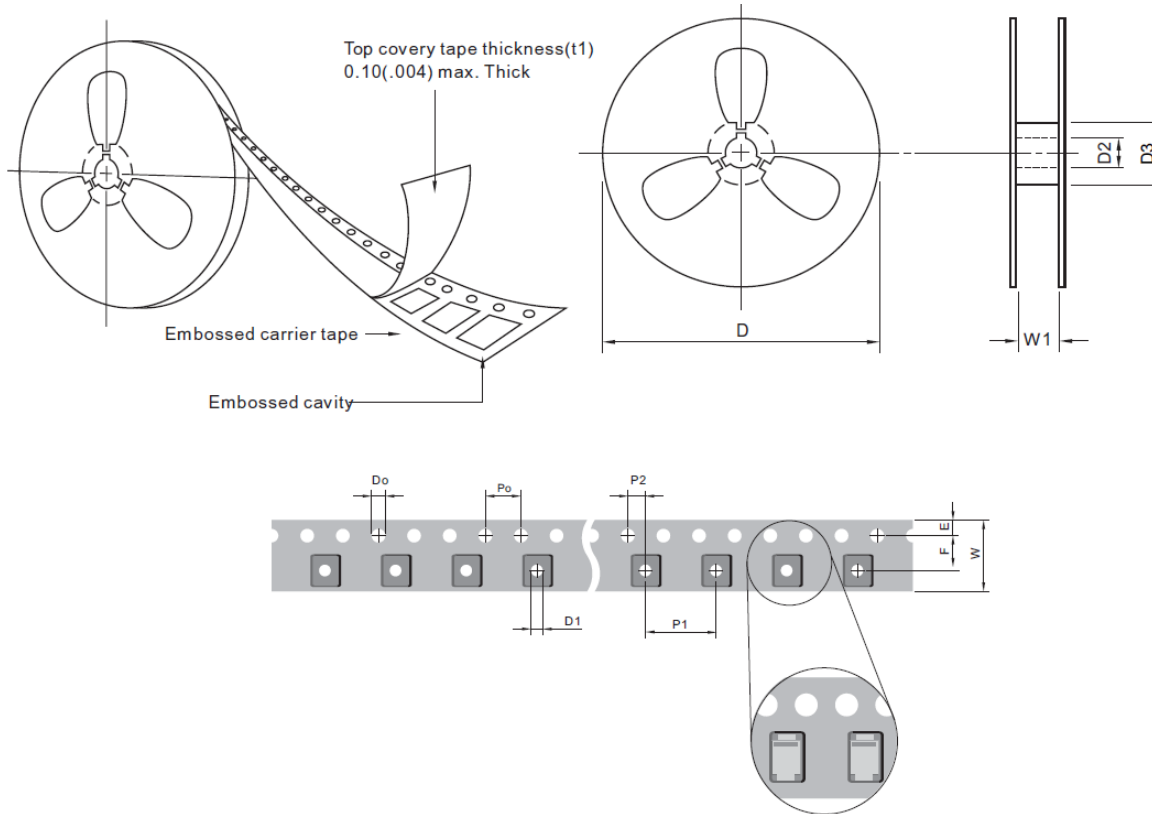
(4) Average Forward Current vs. Operating Temperature



## TAPING SPECIFICATIONS

●SMBF

Unit : mm



SYMBOL	mm
D <sub>0</sub>	1.50 ± 0.10
D <sub>1</sub>	1.00 ± 0.05
E	1.75 ± 0.10
F	5.50 ± 0.05
P <sub>0</sub>	4.00 ± 0.10
P <sub>1</sub>	8.00 ± 0.10
P <sub>2</sub>	2.00 ± 0.05
W	12.0 ± 0.3
D <sub>2</sub>	13.0 ± 0.2
D <sub>3</sub>	min. 100.0
W <sub>1</sub>	min. 12.4 , max. 18.4
D	330.0 ± 2.0

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