



**THE DATASHEET OF  
XBS306S17R-G**



# XBS306S17R-G

## Schottky Barrier Diode, 3A, 60V Type

### FEATURES

- Forward Voltage :  $V_F=0.59V$  (TYP.)
- Forward Current :  $I_{F(AVE)}=3A$
- Repetitive Peak Reverse Voltage :  $V_{RM}=60V$

### APPLICATIONS

- Rectification
- Protection against reverse connection of battery

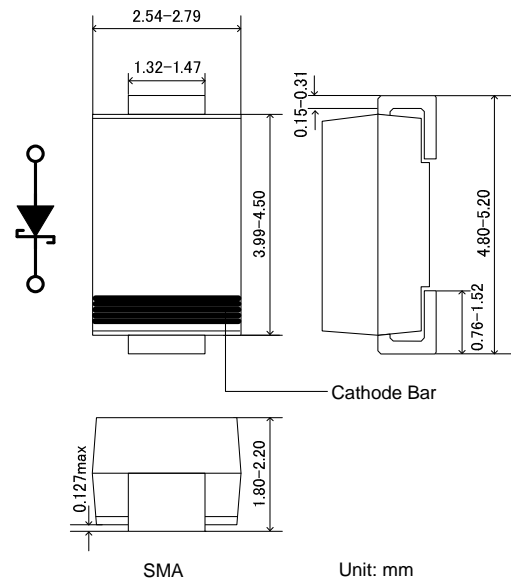
### ABSOLUTE MAXIMUM RATINGS

$T_a=25^\circ C$

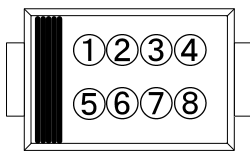
PARAMETER	SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage	$V_{RM}$	60	V
Reverse Voltage (DC)	$V_R$	60	V
Forward Current (Average)	$I_{F(AVE)}$	3	A
Non Continuous Forward Surge Current <sup>*1</sup>	$I_{FSM}$	50	A
Junction Temperature	$T_j$	125	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~+150	$^\circ C$

\*1 : Non continuous high amplitude 60Hz half-sine wave.

### PACKAGING INFORMATION



### MARKING RULE



①②③④⑤⑥: 306S17(Product Number)  
⑦⑧ : Assembly Lot Number

### PRODUCT NAME

PRODUCT NAME	DEVICE ORIENTATION
XBS306S17 R-G	SMA (Halogen & Antimony free)
XBS306S17 R	SMA

\* The "-G" suffix indicates that the products are Halogen and Antimony free as well as being fully RoHS compliant.

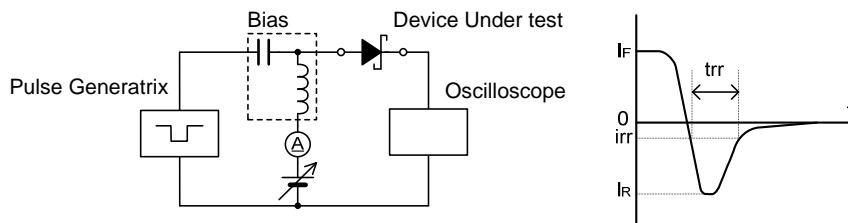
\* The device orientation is fixed in its embossed tape pocket.

### ELECTRICAL CHARACTERISTICS

$T_a=25^\circ C$

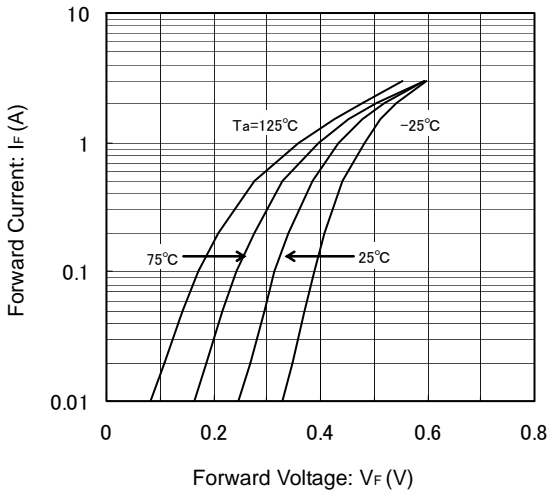
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN.	TYP.	MAX.	
Forward Voltage	$V_{F1}$	$I_F=200\mu A$	-	0.145	-	V
	$V_{F2}$	$I_F=3A$	-	0.59	0.66	V
Reverse Current	$I_{R1}$	$V_R=30V$	-	3	-	$\mu A$
	$I_{R2}$	$V_R=60V$	-	9	300	$\mu A$
Inter-Terminal Capacity	$C_t$	$V_R=1V, f=1MHz$	-	195	-	pF
Reverse Recovery Time <sup>*2</sup>	$t_{rr}$	$I_F=I_R=10mA, irr=1mA$	-	55	-	ns

\*2 :  $t_{rr}$  measurement circuit

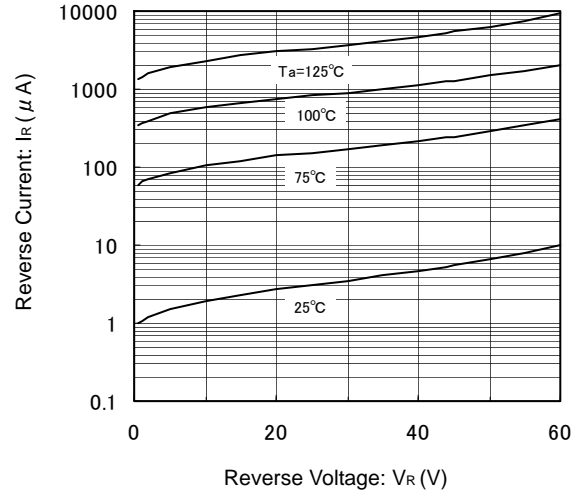


## TYPICAL PERFORMANCE CHARACTERISTICS

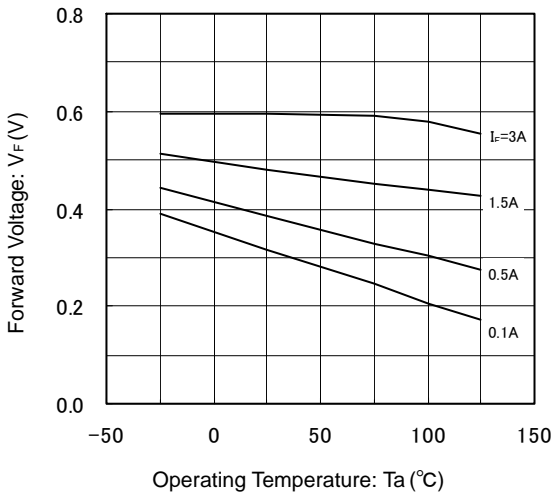
(1) Forward Current vs. Forward Voltage



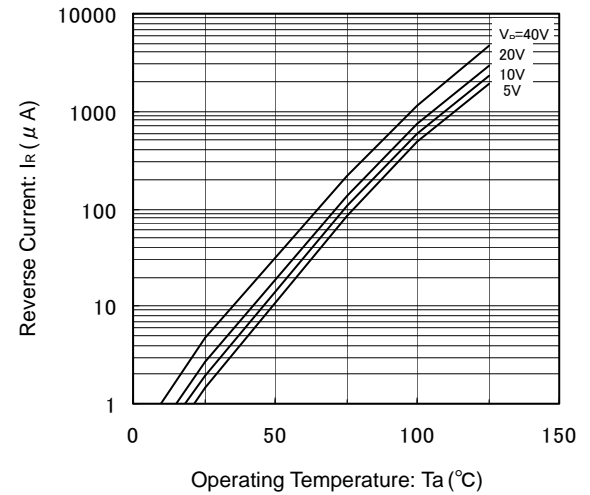
(2) Reverse Current vs. Reverse Voltage



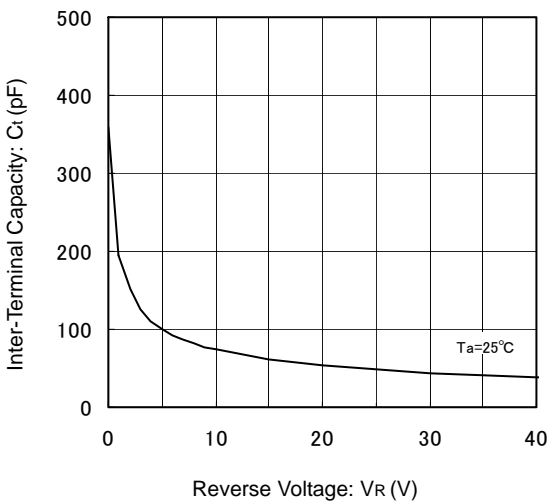
(3) Forward Voltage vs. Operating Temperature



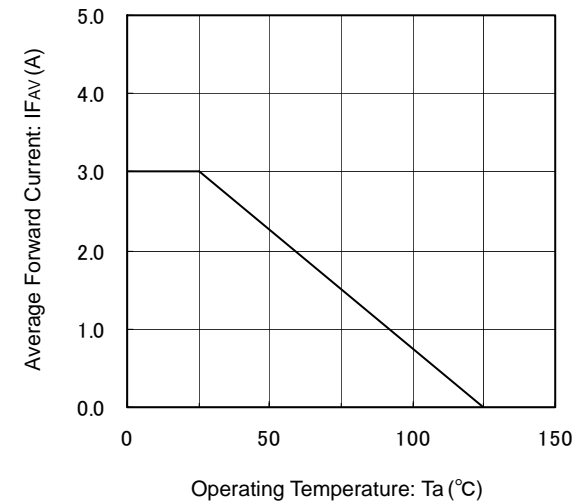
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Average Forward Current vs. Operating Temperature



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