



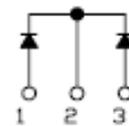
## STF3060C(R) SCHOTTKY RECTIFIER

### Applications:

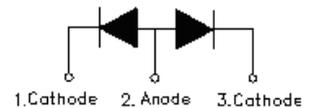
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Features:

- 150 °C T<sub>J</sub> operation
- Center tap configuration
- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

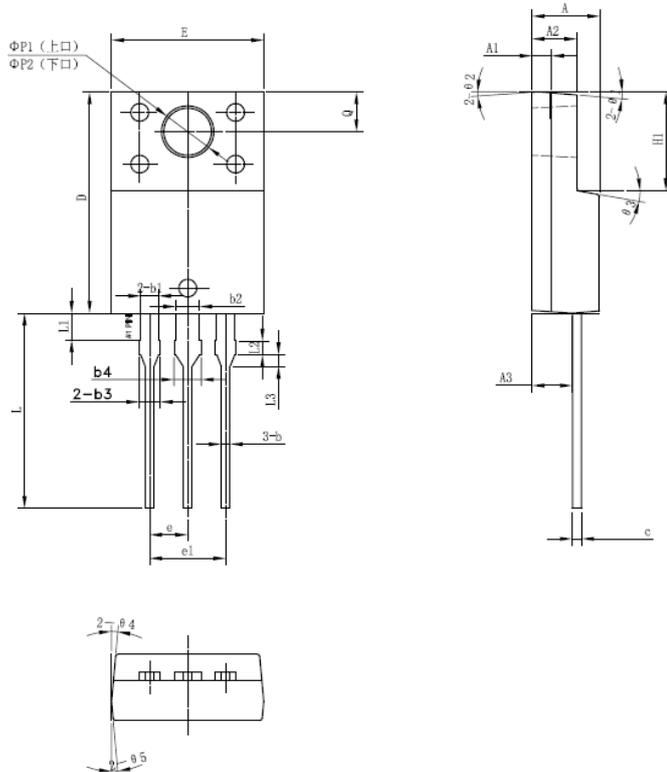


**STF3060C**



**STF3060CR**

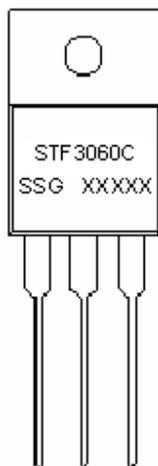
### Mechanical Dimensions: In mm



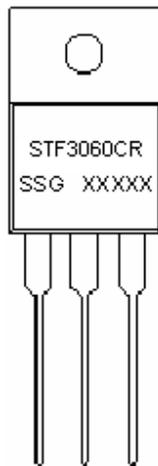
SYMBOL	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.55	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
ΦP1(上□)	3.30	3.50	3.70
ΦP2(下□)	2.99	3.19	3.39
Q	2.50	2.70	2.90
Θ1		5°	
Θ2		4°	
Θ3		10°	
Θ4		5°	
Θ5		5°	

### ITO-220AB

**Marking Diagram:**



**STF3060C**



**STF3060CR**

Where XXXXX is YYWWL

- S = Device Type
- T = Ultralow VF
- F = Package type
- 30 = Forward Current (30A)
- 60 = Reverse Voltage (60V)
- C(R) = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL: 94V-0

**Ordering Information:**

Device	Package	Shipping
STF3060C(R)	ITO-220AB (Pb-Free)	50pcs / tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	60	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 100^\circ\text{C}$ rectangular wave form	30	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	170	A



**Electrical Characteristics:**

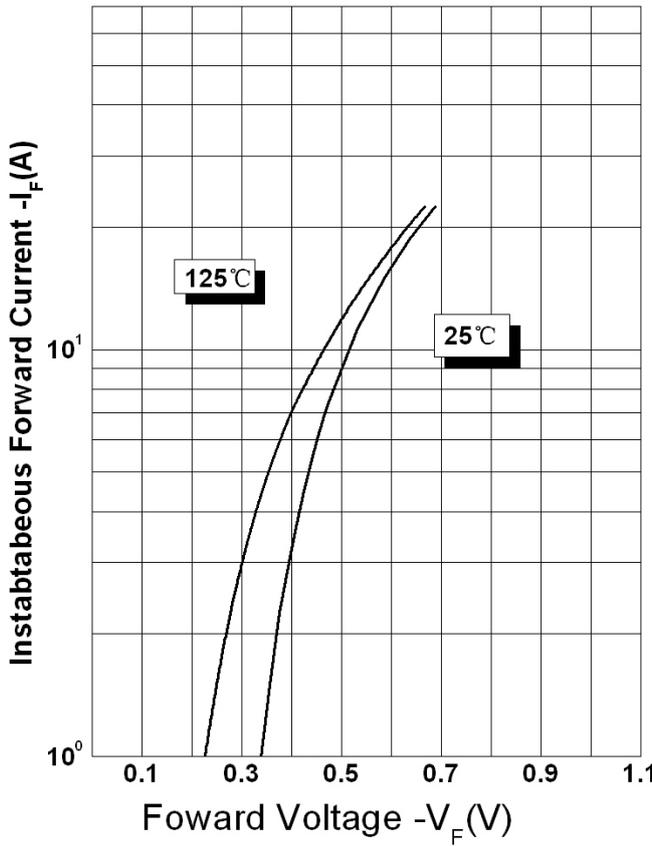
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg)*	$V_{F1}$	@ 7.5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.48	-	V
		@ 15A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.59	0.70	
	$V_{F2}$	@ 7.5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.41	-	V
		@ 15A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.55	0.65	
Reverse Current (per leg)	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	0.024	1.2	mA
Reverse Current (per leg) *	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	14	45	mA
Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	712	-	pF
RSM Isolation Voltage ( $t = 1.0$ second, R. H. $<= 30\%$ , $T_A = 25\text{ }^\circ\text{C}$ )	$V_{ISO}$	Clip mounting, the epoxy body away from the heatsink edge by more than 0.110" along the lead direction.	-	4500	V
		Clip mounting, the epoxy body is inside the heatsink.	-	3500	
		Screw mounting, the epoxy body is inside the heatsink.	-	1500	

\* Pulse Width  $< 300\mu\text{s}$ , Duty Cycle  $< 2\%$

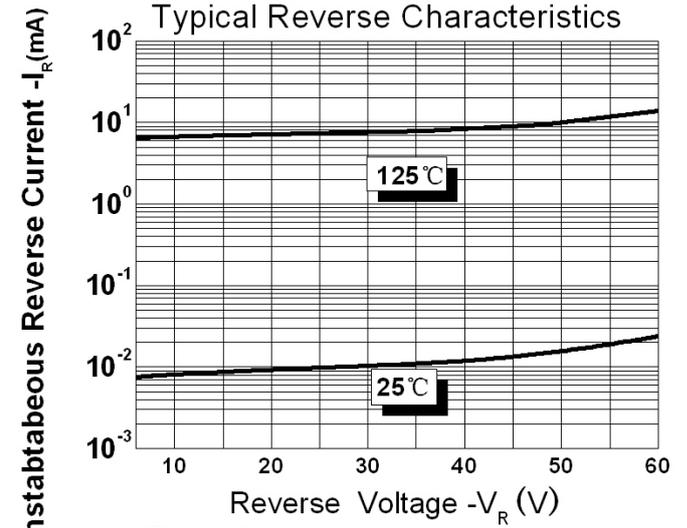
**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	6	$^\circ\text{C/W}$
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

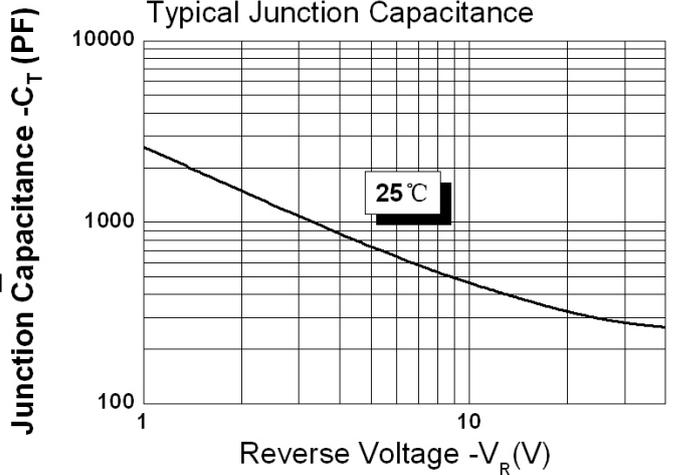
**Figure 1**  
Typical Forward Characteristics



**Figure 2**  
Typical Reverse Characteristics



**Figure 3**  
Typical Junction Capacitance





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