



ST3080C/STB3080C/STF3080C
SCHOTTKY RECTIFIER

Applications:

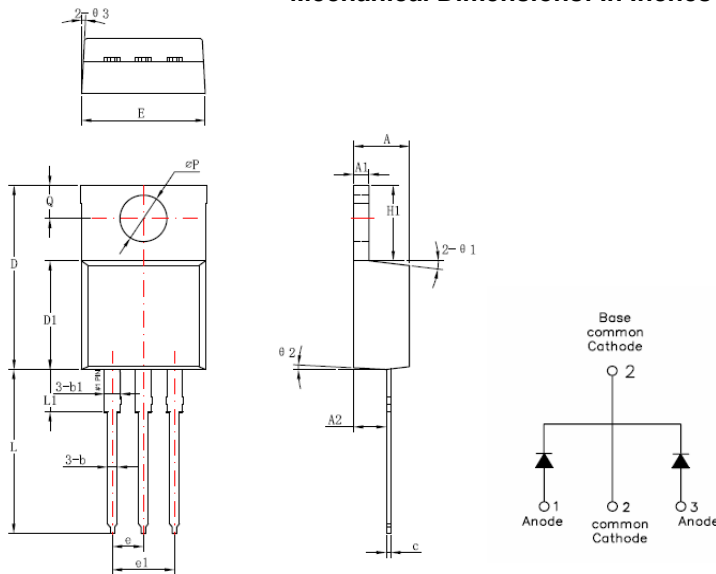
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

- 150 °C T_J operation
- Center tap configuration
- Ultralow forward voltage drop
- Low 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

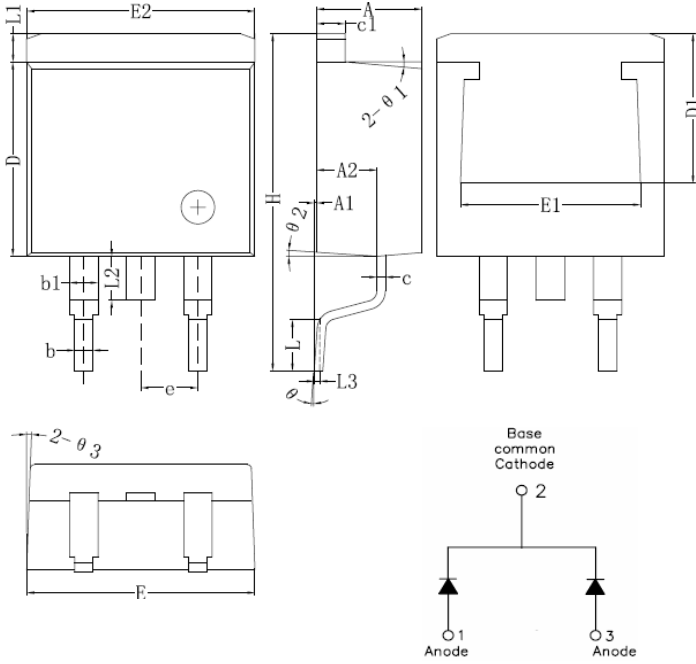
Case styles		
 ST3080C TO-220AB	 STB3080C D²PAK	 STF3080C ITO-220AB

Mechanical Dimensions: In Inches / mm



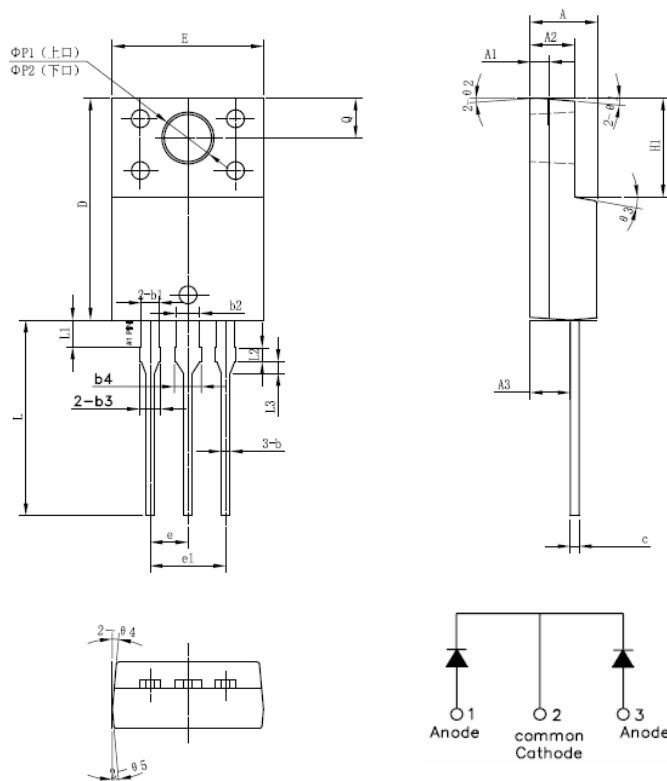
Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	4.42	4.57	4.72
A1	1.17	1.27	1.37
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
D	14.94	15.24	15.54
D1	8.85	9.00	9.15
E	10.01	10.16	10.31
e		2.54	
e1		5.06	
H1	6.04	6.24	6.44
L	12.7	13.56	13.78
L1		3.5	
ΦP	3.74	3.84	4.04
Q	2.54	2.74	2.94
θ1		7°	
θ2		3°	
θ3		4°	

TO-220AB



Symbol	Dimensions in millimeters		
	Min.	Typical	Max.
A	4.55	4.70	4.85
A1	0	0.10	0.25
A2	2.59	2.69	2.89
b	0.71	0.81	0.96
b1		1.27	
c	0.36	0.38	0.61
c1	1.17	1.27	1.37
D	8.55	8.70	8.85
D1	6.40		
E	10.01	10.16	10.31
E1	7.6		
E2	9.98	10.08	10.18
e		2.54	
H	14.6	15.1	15.6
L	2.00	2.30	2.70
L1	1.17	1.27	1.40
L2			2.20
L3		0.25BSC	
e	0	-	8°
e1		5°	
e2		4°	
e3		4°	

D²PAK

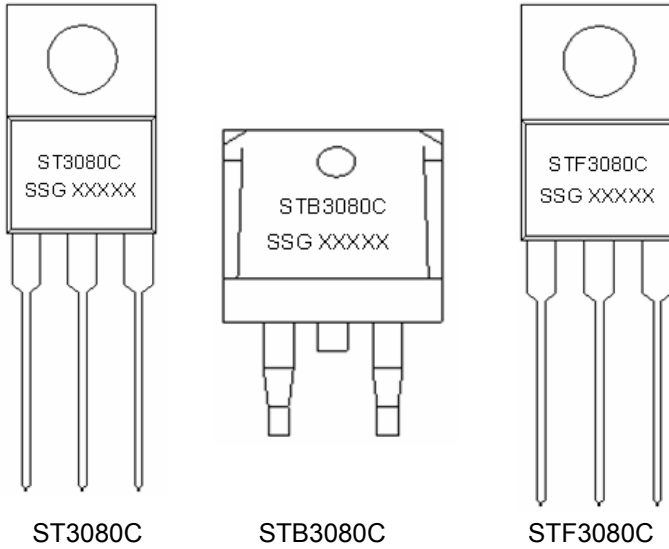


SYMBOL	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.55	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	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:



Where XXXXX is YYWWL

- ST = Device Type
- B/F = Package type
- 30 = Forward Current (30A)
- 80 = Reverse Voltage (80V)
- C = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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

Ordering Information:

Device	Package	Shipping
ST3080C	TO-220AB(Pb-Free)	50pcs / tube
STB3080C	D ² PAK(Pb-Free)	800pcs / reel
STF3080C	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}	-	80	V
Average Forward Current	I _{F(AV)}	50% duty cycle @T _C =100°C, rectangular wave form	30	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I _{FSM}	8.3 ms, half Sine pulse	150	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (per leg)*	V _{F1}	@ 5A, Pulse, T _J = 25 °C	0.52	-	V
		@ 7.5A, Pulse, T _J = 25 °C	0.58	-	
		@ 15A, Pulse, T _J = 25 °C	0.75	0.82	
	V _{F2}	@ 5A, Pulse, T _J = 125 °C	0.46	-	V
		@ 7.5A, Pulse, T _J = 125 °C	0.52	-	
		@ 15A, Pulse, T _J = 125 °C	0.65	0.70	
Reverse Current (per leg)*	I _{R1}	@V _R = rated V _R T _J = 25 °C	0.03	0.7	mA
	I _{R2}	@V _R = rated V _R T _J = 125 °C	20	35	mA

* Pulse Width < 300µs, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	-	-55 to +150	°C
Storage Temperature	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case(per leg)*	R _{θJC}	DC operation	2.5	°C/W
Approximate Weight	wt	-	2/1.85/2	g
Case Style	TO-220AB/D ² PAK/ITO-220AB			

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