

# TO-220-3L/TO-220F Plastic-Encapsulate Diodes

## SBD2060TCTB、SBDF2060TCTB SCHOTTKY BARRIER RECTIFIER

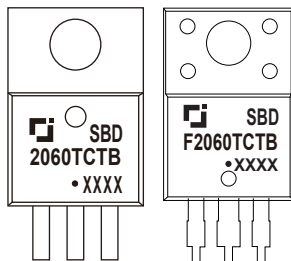
### MAIN CHARACTERISTICS

$I_o$	<b>20 (2×10) A</b>
$V_{RRM}$	<b>60V</b>
$T_j$	<b>150 °C</b>
$V_{F(typ)}$	<b>0.46V (@T<sub>j</sub>=125°C)</b>

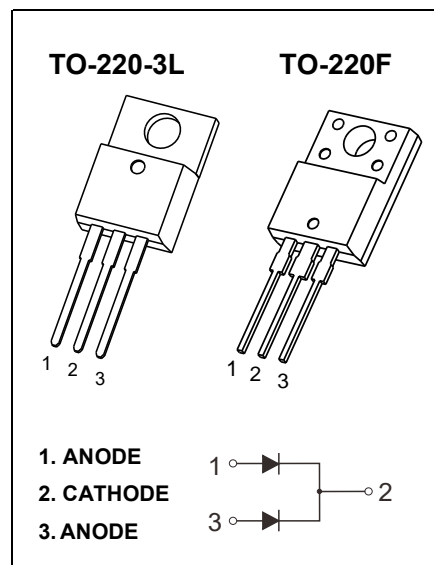
### FEATURES

- Low Power Loss, High Efficiency
- Guard Ring Die Construction for Transient Protection
- High Current Capability and Low Forward Voltage Drop

### MARKING



SBD(F)2060TCTB = Device code  
 Solid dot = Green molding compound device  
 if none, the normal device  
 XXXX = Code



### MAXIMUM RATINGS ( T<sub>a</sub>=25°C unless otherwise noted )

Symbol	Parameter	SBD		Unit
		2060TCTB	F2060TCTB	
$V_{RRM}$	Peak repetitive reverse voltage	60		V
$V_{RWM}$	Working peak reverse voltage			
$V_R$	DC blocking voltage			
$V_{R(RMS)}$	RMS reverse voltage	42		V
$I_o$	Average rectified output current	∅		A
$I_{FSM}$	Non-Repetitive peak forward surge current (8.3ms half sine wave)	180		A
$R_{\theta Jc}$	Thermal resistance from junction to case , T <sub>c</sub> =25°C	2.0	3.0	°C/W
$R_{\theta JA}$	Thermal resistance from junction to ambient	62.5		°C/W
$T_j$	Junction temperature	150		°C
$T_{stg}$	Storage temperature	-55~+150		°C

### ELECTRICAL CHARACTERISTICS ( T<sub>a</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1mA$	60			V
Reverse current	$I_R$	$V_R=60V$	T <sub>j</sub> =25°C	30	200	uA
			T <sub>j</sub> =125°C	20		mA
Forward voltage	$V_F$	$I_F=5A$	T <sub>j</sub> =25°C	0.43		V
			T <sub>j</sub> =125°C	0.35		V
		$I_F=10A$	T <sub>j</sub> =25°C	0.50	0.55	V
			T <sub>j</sub> =125°C	0.46		V

\*Pulse test: pulse width ≤300μs, duty cycles ≤ 2.0%.

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

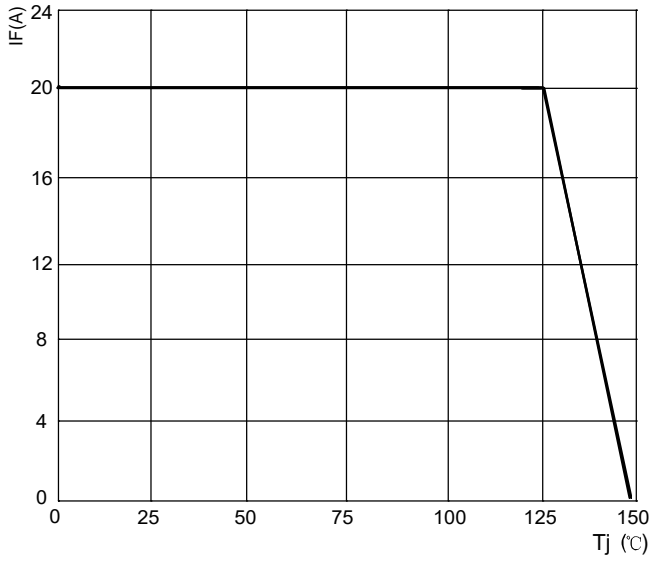


FIG.2: TYPICAL FORWARD CHARACTERISTICS

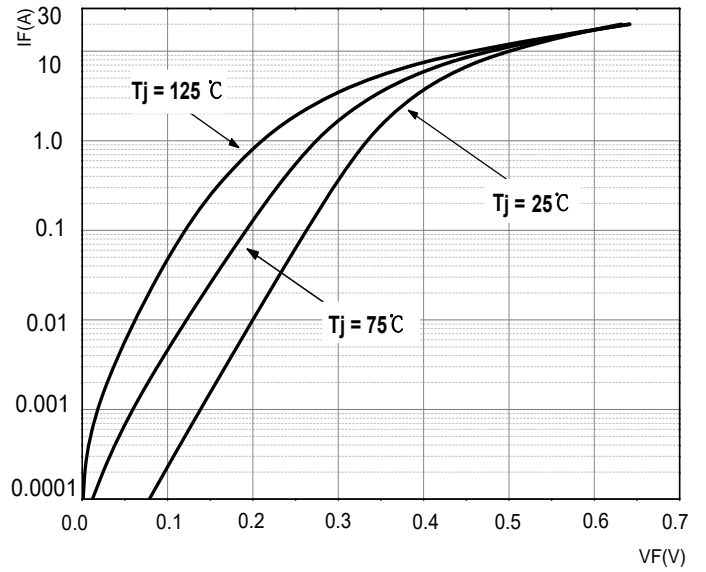


FIG.3: TOTAL CAPACITANCE DERATING CURVE

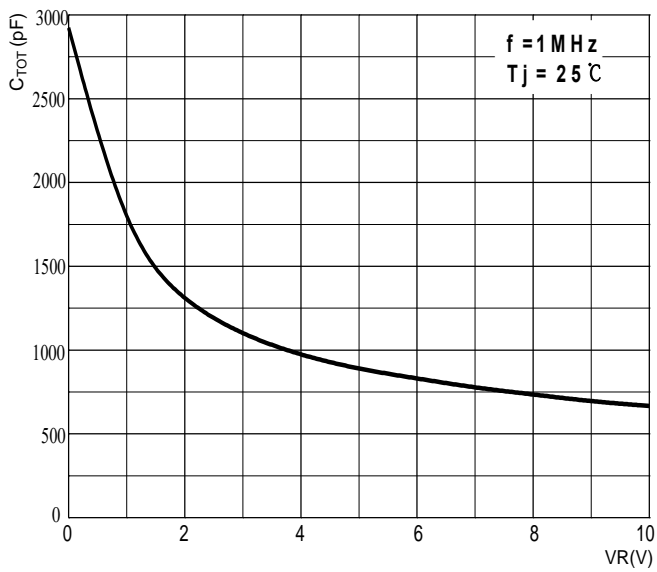
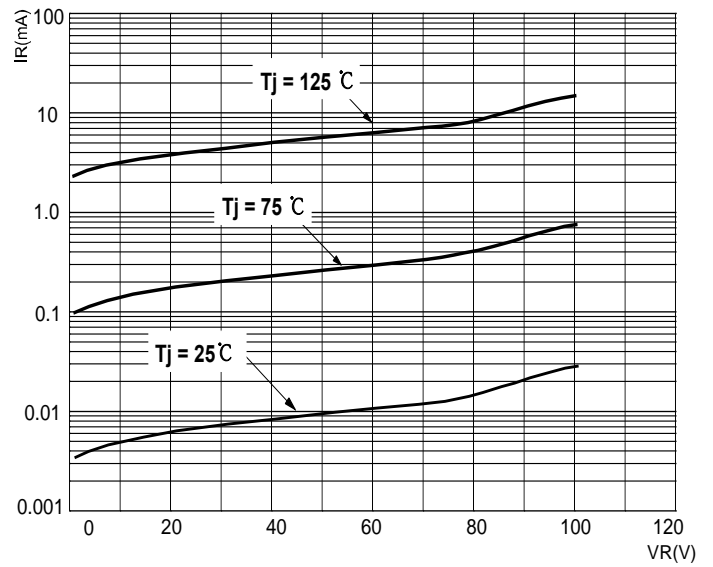


FIG.4: TYPICAL REVERSE CHARACTERISTICS



# TO-220-3L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	4.450	4.750	0.175	0.187
A1	2.520	2.820	0.099	0.111
b	0.710	0.910	0.028	0.036
b1	1.170	1.370	0.046	0.054
c	0.300	0.500	0.012	0.020
c1	1.170	1.370	0.046	0.054
D	9.830	10.330	0.387	0.407
E	8.500	8.900	0.335	0.350
E1	12.050	12.650	0.474	0.498
e	2.540 TYP		0.100 TYP	
e1	4.900	5.200	0.192	0.205
F	2.540	2.940	0.100	0.116
h	0.100 TYP		0.004 TYP	
L	13.300	13.800	0.523	0.543
L1	3.540	3.940	0.139	0.155
$\Phi$	3.735	3.935	0.147	0.155

# TO-220F Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
Φ	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	1.900	2.100	0.075	0.083

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Schottky Diodes & Rectifiers](#) category:*

*Click to view products by [Changjing Electronics Technology](#) manufacturer:*

Other Similar products are found below :

[MA4E2039](#) [MA4E2508M-1112](#) [MBR10100CT-BP](#) [MBR1545CT](#) [MMBD301M3T5G](#) [GS1JE-TP](#) [RB160M-50TR](#) [BAS16E6433HTMA1](#)  
[BAS 3010S-02LRH E6327](#) [BAT 54-02LRH E6327](#) [NSR05F40QNXT5G](#) [NSVR05F40NXT5G](#) [NTE555](#) [JANS1N6640](#) [SB07-03C-TB-H](#)  
[SK310-T](#) [SK33A-TP](#) [SK34B-TP](#) [SS3003CH-TL-E](#) [PDS3100Q-7](#) [GA01SHT18](#) [CRS10I30A\(TE85L,QM](#) [MA4E2501L-1290](#)  
[MBRB30H30CT-1G](#) [DMJ3940-000](#) [SB007-03C-TB-E](#) [SK32A-TP](#) [SK33B-TP](#) [SK35A-TP](#) [SK38B-LTP](#) [SK38B-TP](#) [NRVBM120LT1G](#)  
[NTE505](#) [NTSB30U100CT-1G](#) [VS-6CWQ10FNHM3](#) [CRG04\(T5L,TEMQ\)](#) [ACDBA1100LR-HF](#) [ACDBA1200-HF](#) [ACDBA2100-HF](#)  
[ACDBA240-HF](#) [ACDBA3100-HF](#) [CDBQC0530L-HF](#) [ACDBA260LR-HF](#) [ACDBA1100-HF](#) [MA4E2502L-1246](#) [10BQ060-M3/5BT](#)  
[NRVB130LSFT1G](#) [CRS08TE85LQM](#) [PMAD1108-LF](#) [B120Q-13-F](#)