



SC30J120BS

主要参数 MAIN CHARACTERISTICS

V_{RRM}	1200V
$I_F, T_C \leq 150^\circ\text{C}$	30A
$Q_C \text{ Typ}$	137nC

用途

- 光伏逆变器
- 开关模式电源
- 高压 DC/DC 转换器
- 电池充电器
- 电动驱动
- 不间断电源

APPLICATIONS

- Solar Inverters
- Switch Mode Power Supplies
- High Voltage DC/DC Converters
- Battery Chargers
- Motor Drives
- Uninterruptable power supplies

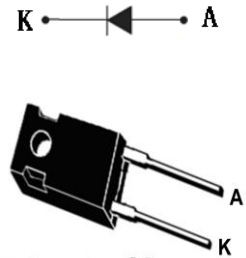
产品特性

- 高阻断电压
- 零反向恢复电流
- 零正向恢复电压
- 高频率应用
- 不受温度影响的开关特性
- 快速开关
- 正温度系数
- RoHS 产品

FEATURES

- High Blocking Voltage
- Zero Reverse Recovery Current
- Zero Forward Recovery Voltage
- High-Frequency Operation
- Temperature-Independent Switching Behavior
- Extremely Fast Switching
- Positive Temperature Coefficient on V_F
- RoHS product

封装 Package



TO-247-2L

订货信息 ORDER MESSAGE

订货型号 Order codes	印记 Marking	封装 Package
无卤-条管 Halogen-Free-Tube		
SC30J120BS-GL-BR	SC30J120BS	TO-247-2L



绝对最大额定值 ABSOLUTE RATINGS ($T_c=25^{\circ}\text{C}$)

项 目 Parameter	符 号 Symbol	数 值 Value	单 位 Unit	测试条件 Test Conditions
反向重复峰值电压 Repetitive Peak Reverse Voltage	V_{RRM}	1200	V	
反向浪涌峰值电压 Surge Peak Reverse Voltage	V_{RSM}	1200	V	
反向直流电压 DC Blocking Voltage	V_{DC}	1200	V	
正向平均电流 Continuous Forward Current	I_F	78 30	A	$T_c=25^{\circ}\text{C}$ $T_c=147^{\circ}\text{C}$
正向重复浪涌电流 Repetitive Peak Forward Surge Current	I_{FRM}	159 102	A	$T_c=25^{\circ}\text{C}$, $t_p=10\text{ms}$, Half Sine Wave $T_c=110^{\circ}\text{C}$, $t_p=10\text{ms}$, Half Sine Wave
正向非重复浪涌电流 Non-Repetitive Peak Forward Surge Current	I_{FSM}	270 200	A	$T_c=25^{\circ}\text{C}$, $t_p=10\text{ms}$, Half Sine Wave $T_c=110^{\circ}\text{C}$, $t_p=10\text{ms}$, Half Sine Wave
耗散功率 Power Dissipation	P_{tot}	363	W	$T_c=25^{\circ}\text{C}$
最高结温及存储温度 Operating and Storage Temperature Range	T_J , T_{STG}	-55~ +175	$^{\circ}\text{C}$	
引线最高焊接温度 Maximum Lead Temperature for Soldering Purposes	T_L	300	$^{\circ}\text{C}$	





电特性 ELECTRICAL CHARACTERISTICS

项 目 Parameter	符 号 Symbol	测试条件 Tests conditions	最小 Min	典型 Typ	最大 Max	单位 Units
正向电压 Forward Voltage	V_F	$I_F = 30A$ $T_J = 25^{\circ}C$ $I_F = 30A$ $T_J = 175^{\circ}C$	-	1.45 2.25	1.7	V
反向电流 Reverse Current	I_R	$V_R = 1200 V$ $T_J = 25^{\circ}C$ $V_R = 1200 V$ $T_J = 175^{\circ}C$		5 50	60 200	μA
总储存电荷 Total Capacitive Charge	Q_C	$V_R = 800V$, $T_J = 25^{\circ}C$ $Q_C = \int_0^{V_R} C(V)dV$		137		nC
总电容 Total Capacitance	C	$V_R = 0 V$, $T_J = 25^{\circ}C$, $f = 1 MHz$ $V_R = 400V$, $T_J = 25^{\circ}C$, $f = 1 MHz$ $V_R = 800V$, $T_J = 25^{\circ}C$, $f = 1 MHz$		1440 126 104		pF
电容储存能量 Capacitance Stored Energy	E_C	$V_R = 800 V$		40		μJ
单脉冲雪崩能量 Single Pulsed Avalanche Energy	E_{AS}	$T_C = 25^{\circ}C$, $V_D = 50V$, $L = 0.5mH$, $I_{AS} = 33.5A$		280		mJ

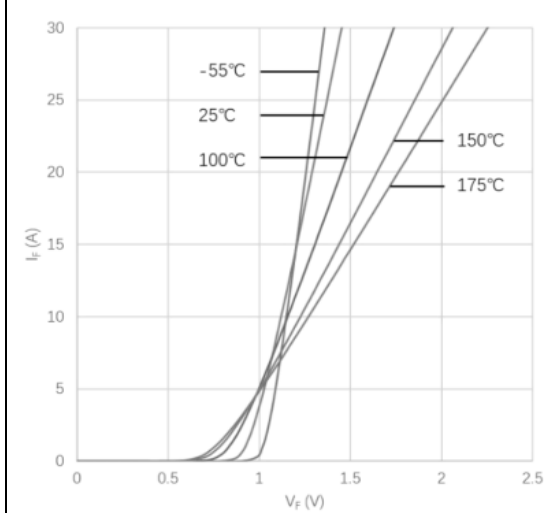
热特性 THERMAL CHARACTERISTICS

项 目 Parameter	符 号 Symbol	典型值 Typ	单 位 Unit
		TO-247-2L	
结到管壳的热阻 Thermal Resistance Junction to Case	$R_{th(j-c)}$	0.413	$^{\circ}C/W$

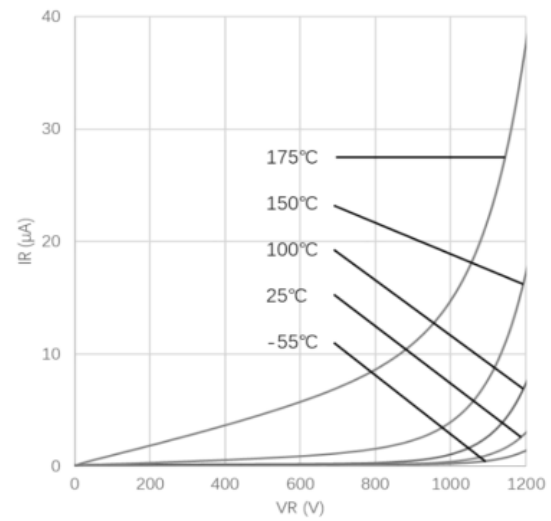




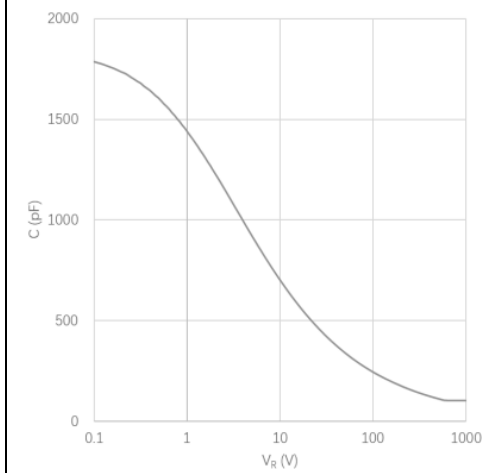
典型性能 Typical Performance



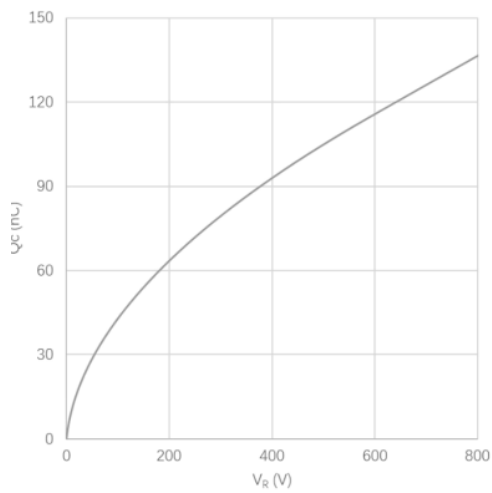
Forward Characteristics



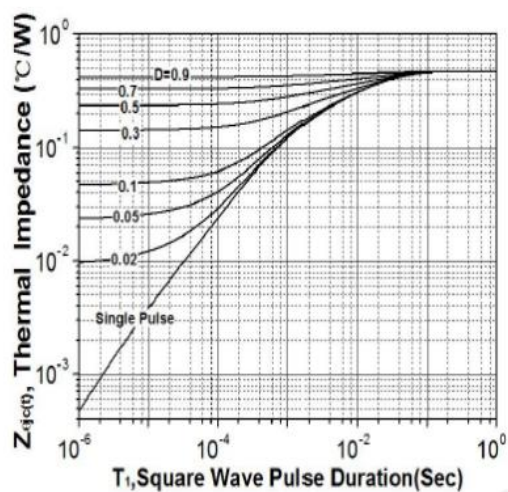
Reverse Characteristics



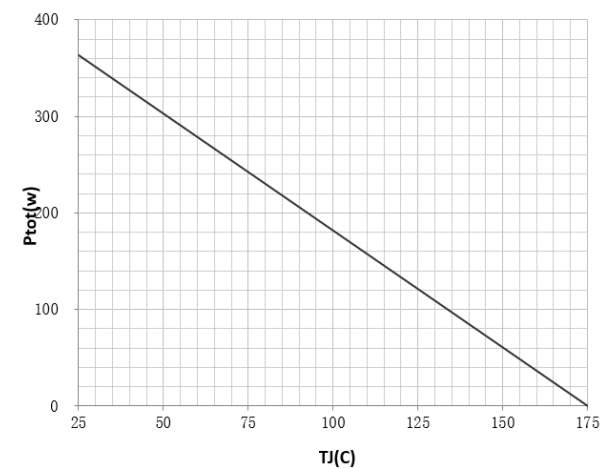
Capacitance vs. Reverse Voltage



Capacitance Charge vs. Reverse Voltage



Transient Thermal Impedance



Power Derating

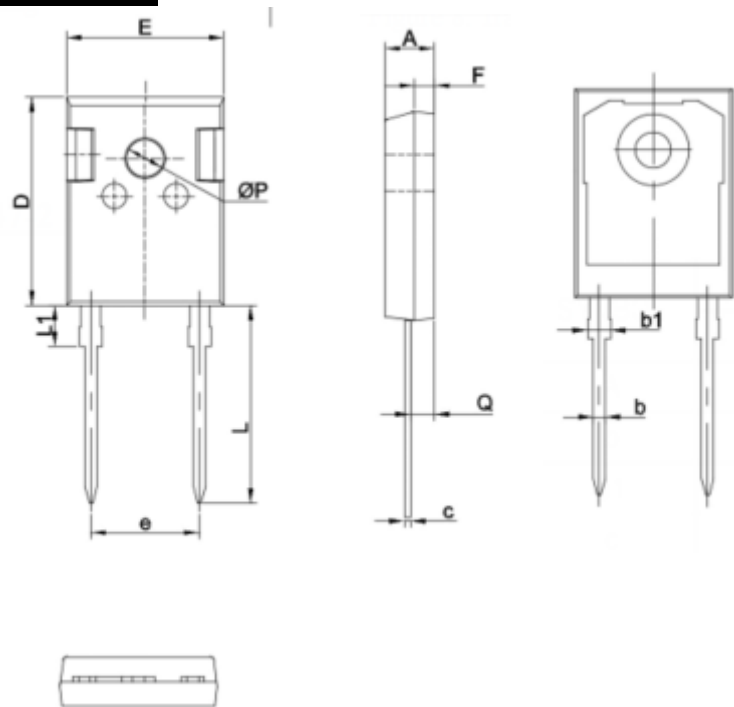




外形尺寸 PACKAGE MECHANICAL DATA

TO-247-2L

单位 Unit: mm



SYMBOL	MM	
	MIN	MAX
A	4.80	5.20
b	1.10	1.30
b1	1.95	2.25
c	0.50	0.70
D	20.80	21.20
E	15.60	16.00
F	1.85	2.15
e	10.73	11.03
L	19.62	20.22
L1	3.93	4.33
ØP	3.40	3.80
Q	2.26	2.56



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4. 本说明书如有版本变更不另外告知。

NOTE

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