

SBL2040

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	20 (2×10) A
V_{RRM}	40 V
T_j	150 °C
$V_{F(max)}$	0.5V (@ $T_j=125^{\circ}C$)

用途

- 高频开关电源
- 低压续流电路和保护电路

产品特性

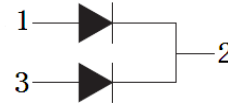
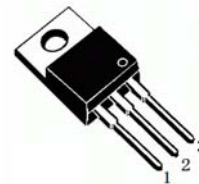
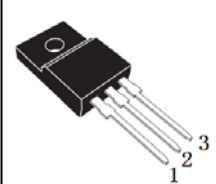
- 共阴结构
- 低功耗，高效率
- 良好的高温特性
- 有过压保护环，高可靠性
- 环保 (RoHS) 产品

APPLICATIONS

- High frequency switch power supply
- Free wheeling diodes, polarity protection applications

FEATURES

- Common cathode structure
- Low power loss, high efficiency
- High Operating Junction Temperature
- Guard ring for overvoltage protection, High reliability
- RoHS product

封装 Package

T0-220

T0-220F

T0-220HF

订货信息 ORDER MESSAGE

订货型号 Order codes	印记 Marking	封装 Package	无卤素 Halogen Free	包装 Packaging	器件重量 Device Weight
SBL2040Z	SBL2040	TO-220	否 NO	条管 Tube	1.98 g(typ)
SBL2040ZR	SBL2040	TO-220	是 YES	条管 Tube	1.98 g(typ)
SBL2040F	SBL2040	TO-220F	否 NO	条管 Tube	1.70 g(typ)
SBL2040FR	SBL2040	TO-220F	是 YES	条管 Tube	1.70 g(typ)
SBL2040HF	SBL2040	TO-220HF	否 NO	条管 Tube	1.70 g(typ)
SBL2040HFR	SBL2040	TO-220HF	是 YES	条管 Tube	1.70 g(typ)

绝对最大额定值 ABSOLUTE RATINGS (Tc=25℃)

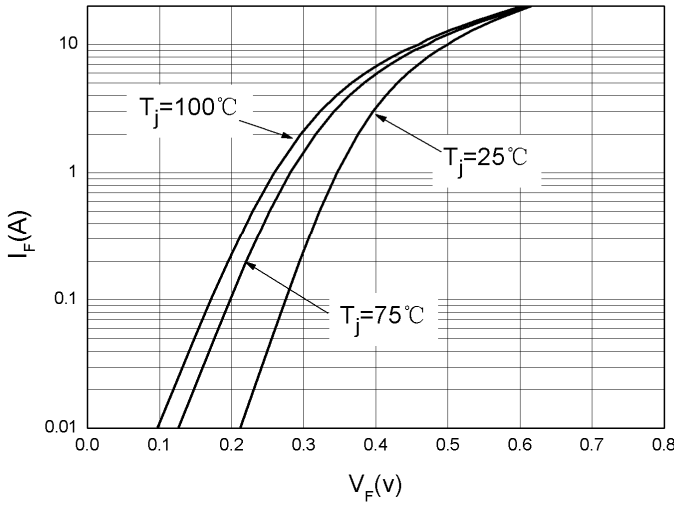
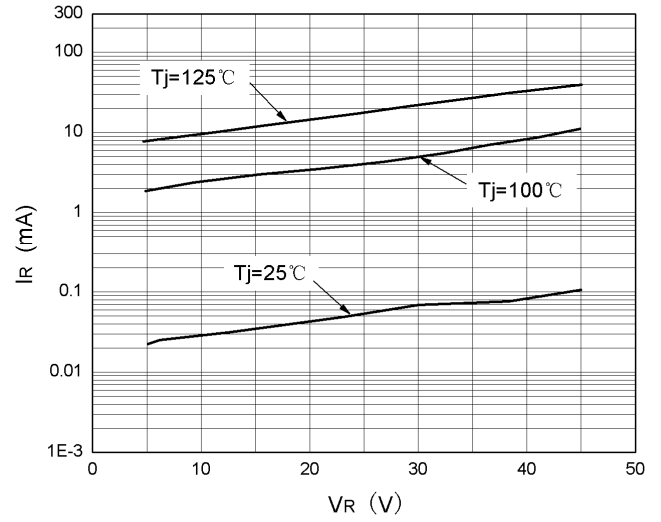
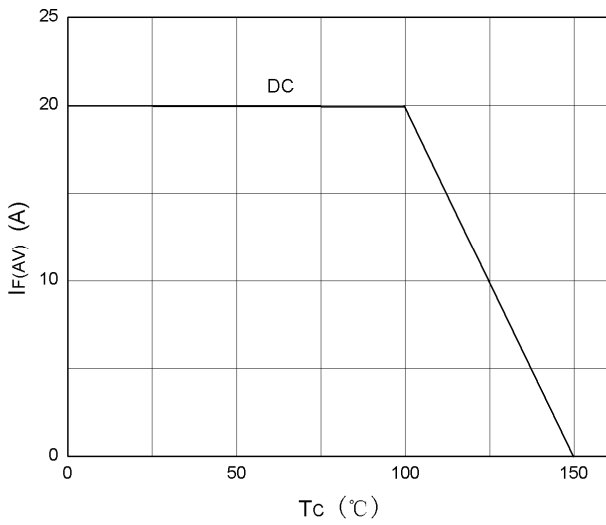
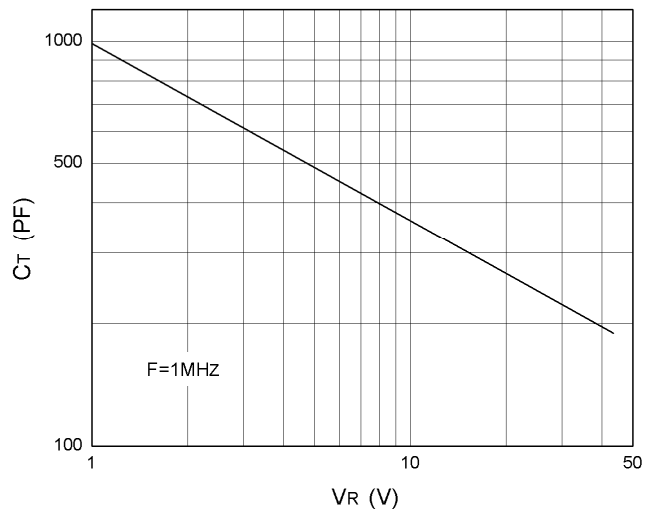
项 目 Parameter		符 号 Symbol	数 值 Value	单 位 Unit
最大反向重复峰值电压 Repetitive peak reverse voltage		V_{RRM}	40	V
最大直流阻断电压 Maximum DC blocking voltage		V_{DC}	40	V
正向平均整流电流 Average forward current	T _c =100℃ (TO-220, TO-220F, TO-220HF)	整个器件 per device 单 侧 per diode	20	A
			10	
正向峰值浪涌电流 Surge non repetitive forward current (额定负载 8.3ms 半正弦波—按 JEDEC 方法) 8.3 ms single half-sine-wave (JEDEC Method)		I_{FSM}	150	A
最高结温 Maximum junction temperature		T_j	150	℃
储存温度 Storage temperature range		T_{STG}	-40~+150	℃

电特性 ELECTRICAL CHARACTERISTICS

项 目 Parameter	测试条件 Tests conditions		最小值 Value(min)	典型值 Value(typ)	最大值 Value(max)	单 位 Unit
I_R	T _j =25℃	$V_R=V_{RRM}$			200	μA
	T _j =125℃				100	mA
V_F	T _j =25℃	$I_F=10A$		0.50	0.60	V
	T _j =125℃			0.45	0.50	V

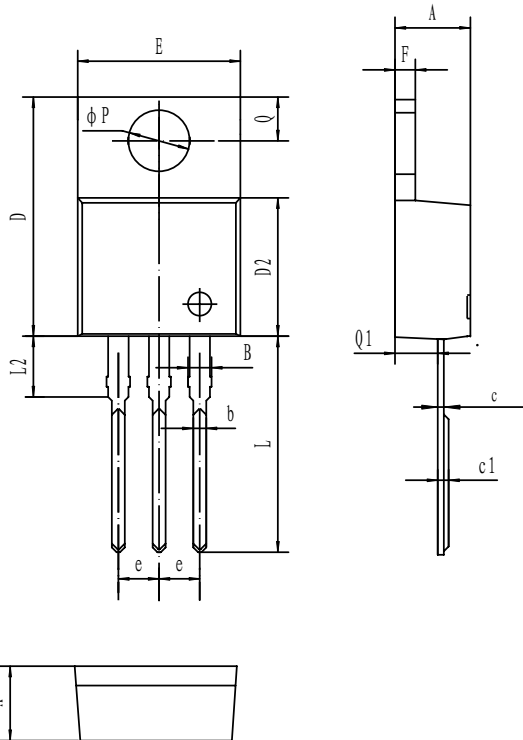
热特性 THERMAL CHARACTERISTICS

项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	$R_{th(j-c)}$		2.0	℃/W
TO-220			2.4	
TO-220F TO-220HF			2.4	

特征曲线 ELECTRICAL CHARACTERISTICS (curves)
 I_F vs V_F

 I_R vs V_R

 $I_{F(AV)}$ vs T_c

 C_T vs V_R


外形尺寸 PACKAGE MECHANICAL DATA
TO-220

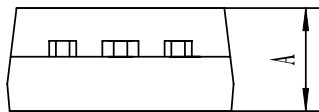
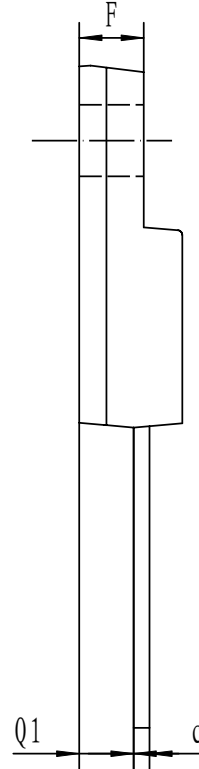
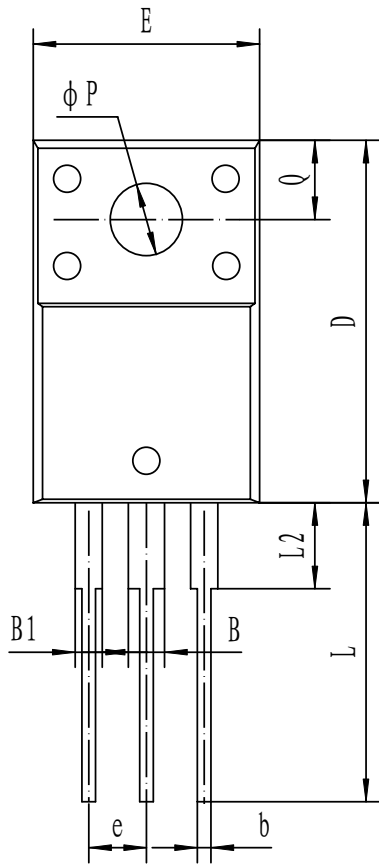
单位 Unit : mm



符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00

外形尺寸 PACKAGE MECHANICAL DATA
TO-220F

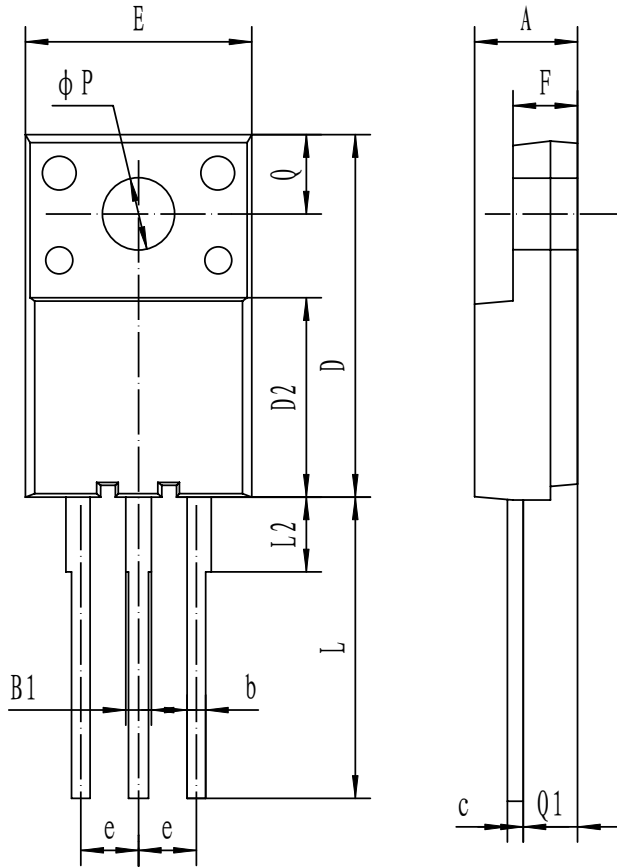
单位 Unit : mm



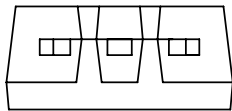
符号 Symbol	Min	Max
A	4.3	4.7
B	1.5	1.75
B1	1.1	1.35
b	0.5	0.75
c	0.5	0.75
D	14.5	15.5
E	9.96	10.36
e	2.54 (typ)	
F	2.8	3.2
L	12.7	13.7
L2	3.6	4.0
ϕP	3.3	3.7
Q	2.5	2.9
Q1	2.5	2.9

外形尺寸 PACKAGE MECHANICAL DATA
TO-220HF

单位 Unit : mm



符 号 Symbol	Min	Max
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.70
D	15.0	16.5
D2	7.8	9.4
E	9.62	10.62
e	2.54(typ)	
F	2.3	3.3
L	12.0	14.0
L2	3.1	3.5
ΦP	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5



备注：

- 1.订货前请与公司核实。
- 2.购买时如有疑问，请与公司本部联系。
- 3.在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
- 4.本说明书如有版本变更不另外告知。

NOTE：

- 1.Please check with our company when ordering .
- 2.If there is any question, please don't be hesitate to contact us.
3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Gesar electronics international co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.