



STS10100S

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	10A
V_{RRM}	100V
T_{Jmax}	150 °C
IFSM	150A
$V_{F(max)}$	0.62V (@ $T_j=125^{\circ}C$)

用途

- 低压、高频整流
- 低压续流电路和保护电路

APPLICATIONS

- Low voltage, high frequency rectifier
- Free wheeling diodes, polarity protection applications

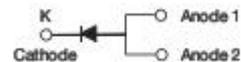
产品特性

- 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

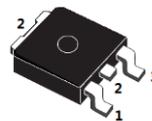
FEATURES

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

封装 Package



SMP-1



DPAKM

订货信息 ORDER MESSAGE

订货型号 Order codes		印 记 Marking	封 装 Package
有卤-编带 Halogen-Reel	无卤-编带 Halogen Free-Reel		
STS10100S-XG-AR	STS10100S-XG-A	STS10100S	SMP-1
STS10100S-RM-AR	STS10100S-RM-A	STS10100S	DPAKM



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
最大反向重复峰值电压 Repetitive peak reverse voltage	V_{RRM}	100	V
最大直流阻断电压 Maximum DC blocking voltage	V_{DC}	100	V
正向平均整流电流 $T_C=100^{\circ}\text{C}$ Average Rectified Forward Current	$I_{F(AV)}$	10	A
正向峰值浪涌电流 Surge non repetitive forward current (额定负载 10ms 半正弦波) 10 ms single half-sine-wave	I_{FSM}	150	A
最高结温 Maximum junction temperature	T_j	150	$^{\circ}\text{C}$
工作结温和储存温度范围 Storage temperature range	T_{Jmax}/T_{STG}	-40~+150	$^{\circ}\text{C}$

电特性 ELECTRICAL CHARACTERISTICS

项 目 Parameter	测试条件 Tests conditions		典型值 Value(typ)	最大值 Value(max)	单 位 Unit
I_R	$T_j = 25^{\circ}\text{C}$	$V_R = V_{RRM}$	0.02	0.05	mA
	$T_j = 125^{\circ}\text{C}$	$V_R = V_{RRM}$	3.0	20	
V_F	$T_j = 25^{\circ}\text{C}$	$I_F = 5\text{A}$	0.54	0.60	V
	$T_j = 25^{\circ}\text{C}$	$I_F = 10\text{A}$	0.65	0.7	
	$T_j = 125^{\circ}\text{C}$	$I_F = 5\text{A}$	0.51	0.55	
	$T_j = 125^{\circ}\text{C}$	$I_F = 10\text{A}$	0.62	0.65	

热特性 THERMAL CHARACTERISTICS

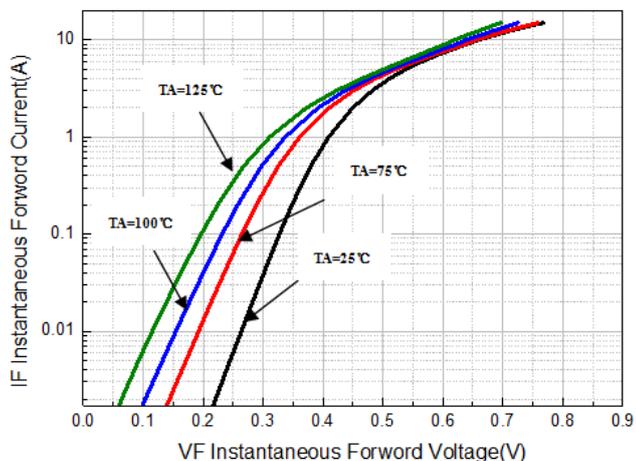
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	$R_{th(j-c)}$	—	5	$^{\circ}\text{C/W}$
			35	
结到环境的热阻 Thermal resistance from junction to ambient	$R_{th(j-a)}$	—	80	
			200	



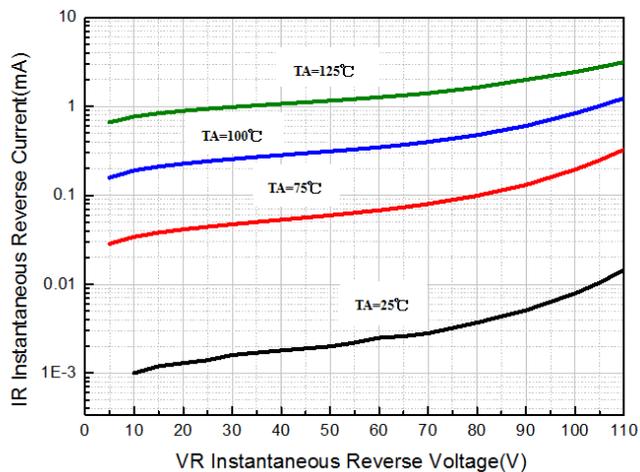


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

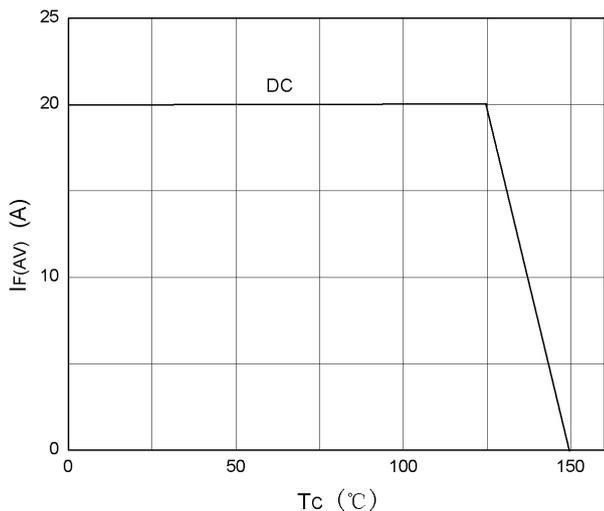
IF vs VF



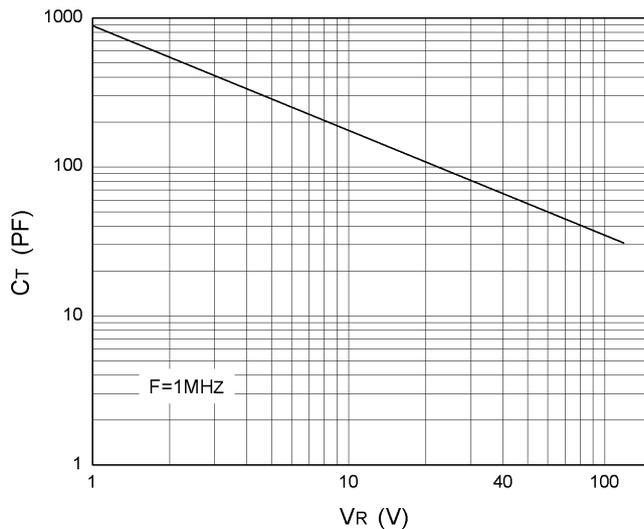
IR vs VR

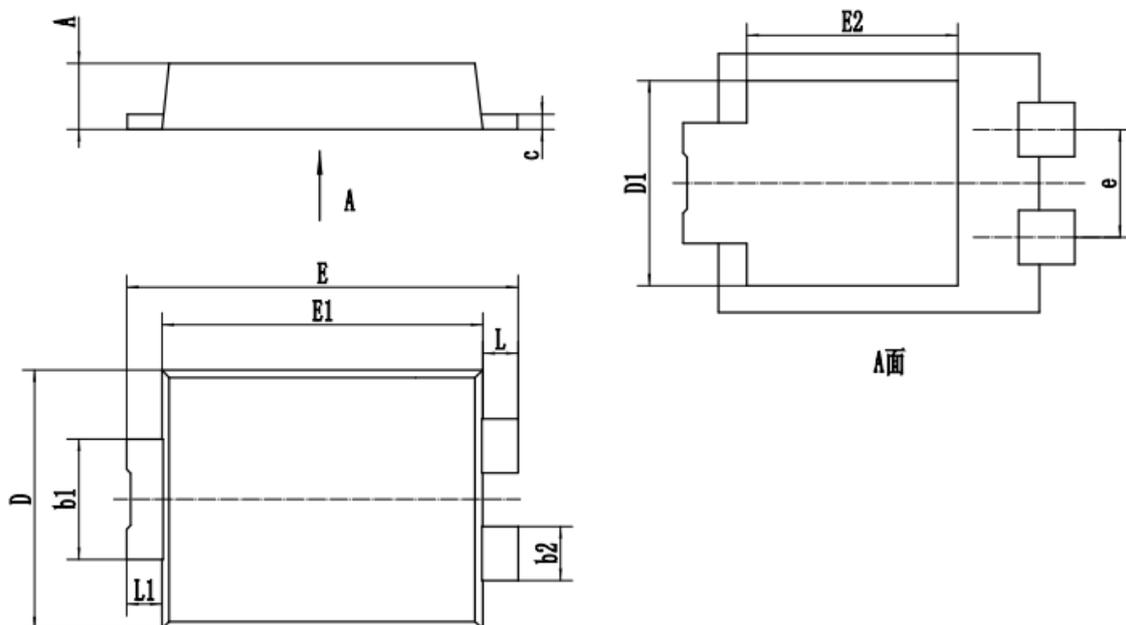


IF(AV) vs Tc



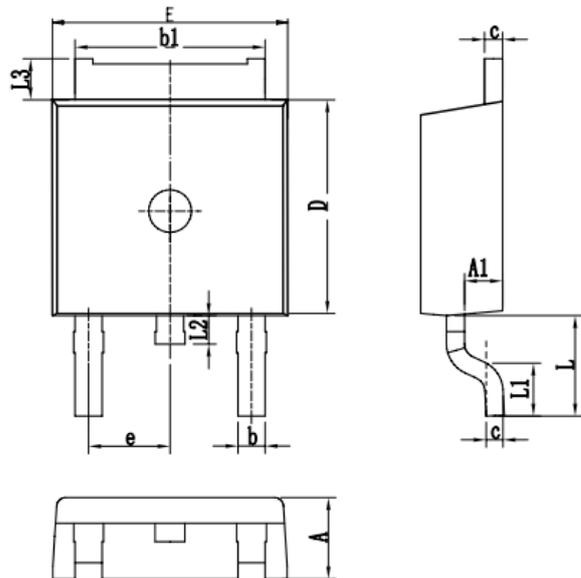
CT vs VR





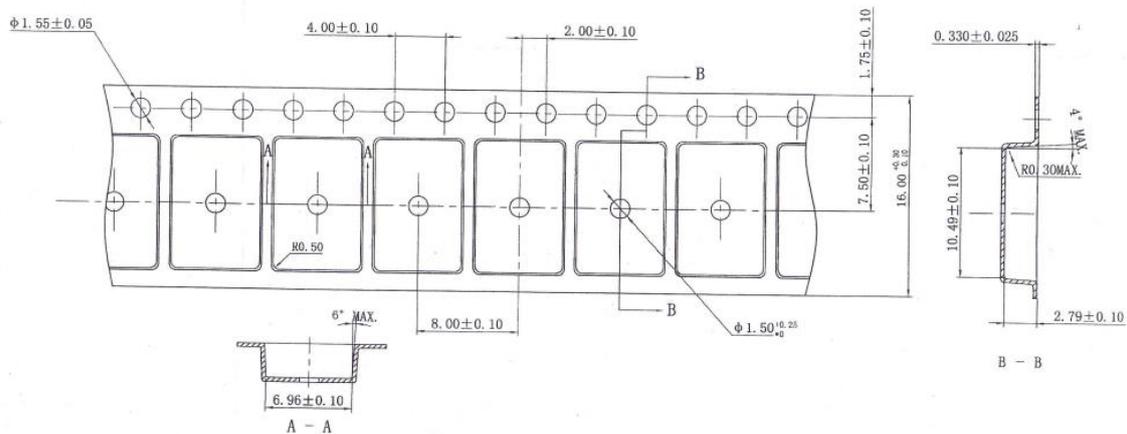
符号 Symbol	Min	Max
A	0.90	1.30
b1	1.60	2.00
b2	0.70	1.10
c	0.28	0.47
D	3.70	4.30
D1	2.80	3.30
E	6.30	6.70
E1	5.20	5.60
E2	3.05	4.05
e	1.60	2.00
L	0.30	0.80
L1	0.30	0.80





SYMBOL	mm	
	MIN	MAX
A	2.10	2.50
A1	0.80	1.20
b	0.66	0.96
b1	5.10	5.50
c	0.40	0.62
D	5.85	6.45
E	6.30	6.90
e	2.286BSC	
L	2.40	3.00
L1	0.85	1.45
L2	0.60	1.10
L3	0.67	1.07

编带 REEL





沟槽肖特基势垒二极管
TRENCH SCHOTTKY BARRIER DIODE

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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. Jilin Sino-microelectronics co., Ltd sales its product either through direct sales or sales agent , thus, for customers, when ordering , please check with our company.
2. We strongly recommend customers check carefully on the trademark when buying our product, 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. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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