SEMICONDUCTOR

SR15100G

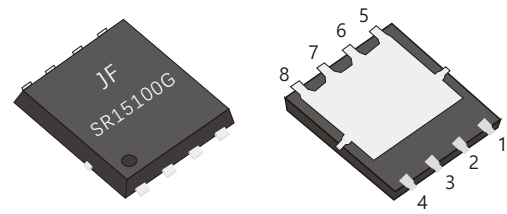
SCHOTTKY BARRIER RECTIFIER
Reverse Voltage - 100 Volts
Forward Current - 15.0Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU

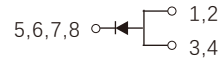
Pb
RoHS
COMPLIANT

DFN5×6
SR15100G



MECHANICAL DATA

- Case: DFN5×6 Package
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Mounting Position: Any



TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters,
free wheeling ,and polarity protection applications

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	15.0A
V_{RRM}	100V
I_{FSM}	250A
V_F at I_F=15.0A,25℃	0.76V
T_{JMAX}	150℃

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{F(AV)}$	15.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	250	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃

ELECTRICALCHARACTERISTCS（T_A=25℃ Unless otherwise noted）

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	T_A=25℃	I_F=15.0A	V_F 1)	0.76	0.80	V
		I_F=5.0A		0.64	-	
		I_F=2.0A		0.54	-	
	T_A=125℃	I_F=15.0A		0.60	-	
		I_F=5.0A		0.50	-	
		I_F=2.0A		0.42	-	
Reverse current	T_A=25℃	VR=100V	I_R 2)	0.8	5.0	μA
	T_A=100℃			-	1.0	mA
	T_A=125℃			-	5.0	
Typical junction capacitance	4V,1MHz		C_J	420		pF
Reverse recovery time	I_F=0.5A,I_R=1A,I_{RR}=0.25A 3)		Trr	26	32	ns

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width≤40ms

3.快恢复二极管trr测试条件，使用具备此测试条件的仪表进行测试。如：郑州易昕电子科技有限公司ES-FR-802B trr测试仪表。

THERMAL CHARACTERISTCS

Parameter	Symbol	SR15100G	Unit
Typical thermal resistance	$R_{\theta JA}$ 3)	55	℃/W
	$R_{\theta JC}$ 4)	3.5	

3.Thermal resistance between junction and ambient mounted on P.C.B with 25.4mm*25.4mm copper pad areas

4.Thermal resistance between junction and case(bottom)

AVAILABALEPACK INFORMATION

Part No.	Package Type	Package	Quality(box)
SR15100G	DFN5×6	Tape & Reel	5000

FIG.1-FORWARD CURRENT DERATING CURVE

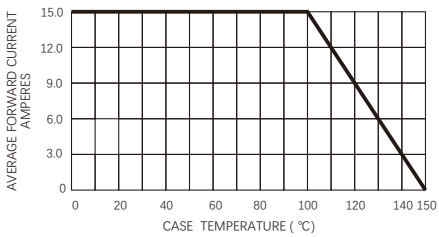


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

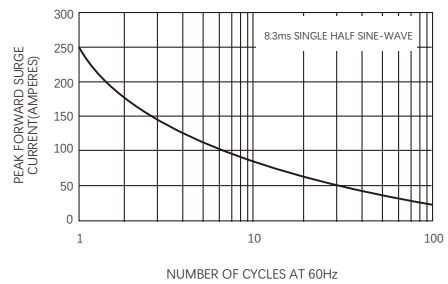


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

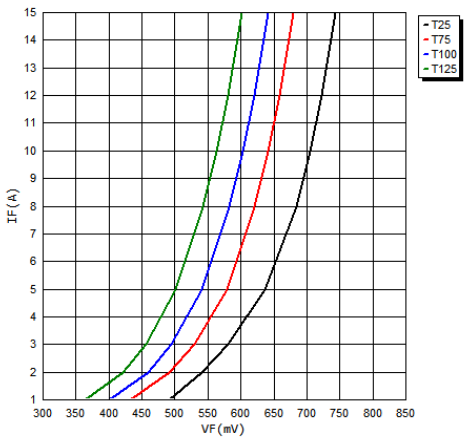


FIG.4-TYPICAL REVERSE CHARACTERISTICS

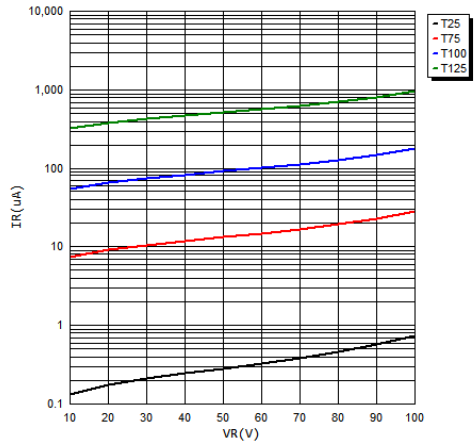
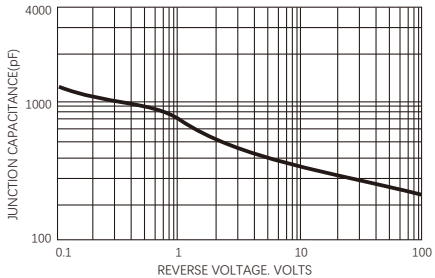
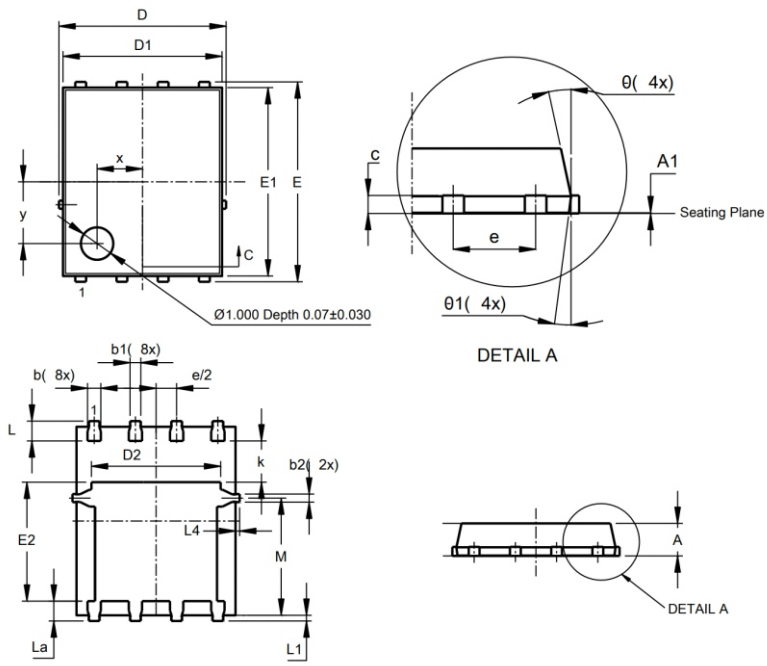


FIG.5-TYPICAL JUNCTION CAPACITANCE



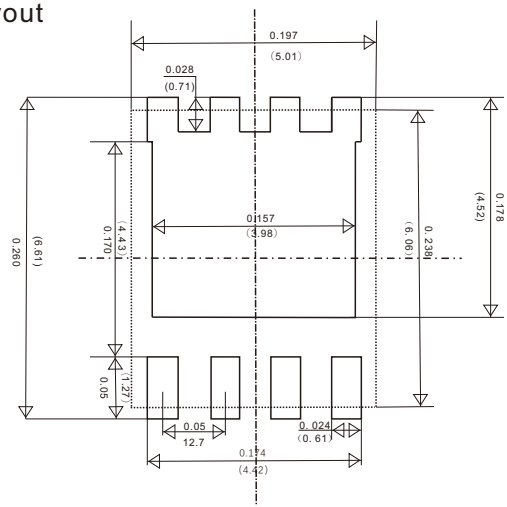
Dimensions

DFN5×6 PACKAGE OUTLINE DIMENSIONS



Dim	Min	Max	Type
A	0.90	1.10	1.00
b	0.23	0.41	0.32
b1	0.24	0.30	0.27
b2	0.16	0.32	0.23
c	0.17	0.27	0.22
D	-	-	5.01
D1	4.80	4.95	4.88
D2	-	-	3.98
E	-	-	6.06
E1	5.72	5.82	5.77
E2	3.42	3.52	3.47
k	-	-	1.33
L	0.56	0.66	0.61
La	0.57	0.67	0.63
L1	0.06	0.15	0.11
L4	-	-	0.06
M	3.00	3.20	3.08
Φ	10	11	10.39

Suggested Pad Layout



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