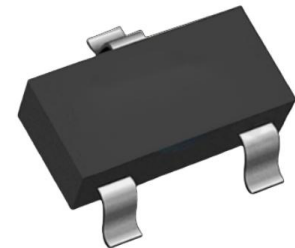
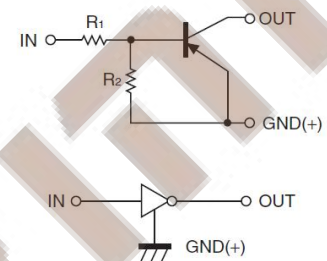


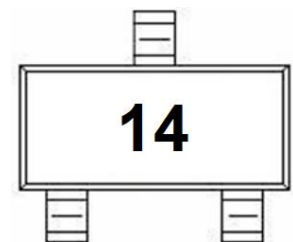
Features

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit)
- The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input.They also have the advantage of almost completely eliminating parasitic effects
- Only the on/off conditions need to be set for operation,marking Device design easy
- Moisture Sensitivity Level 3



Mechanical Data

- SOT-23-3L Package
- Epoxy UL:94V-0
- Mounting Position:Any
- R1=10KΩ, R2=10KΩ



Package Marking and Ordering Information

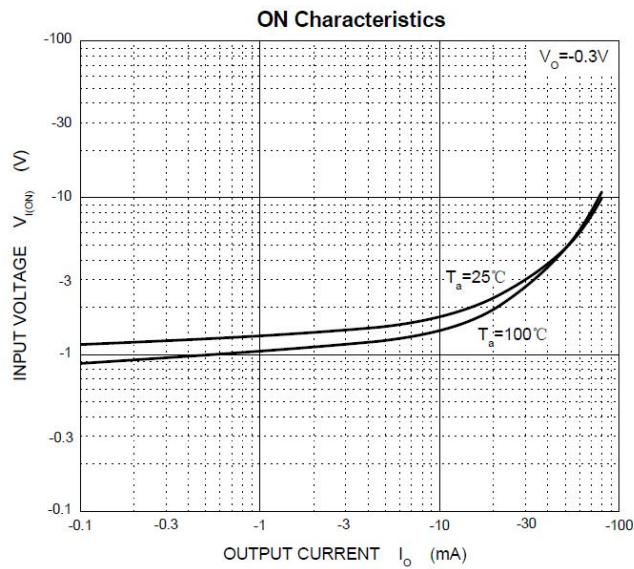
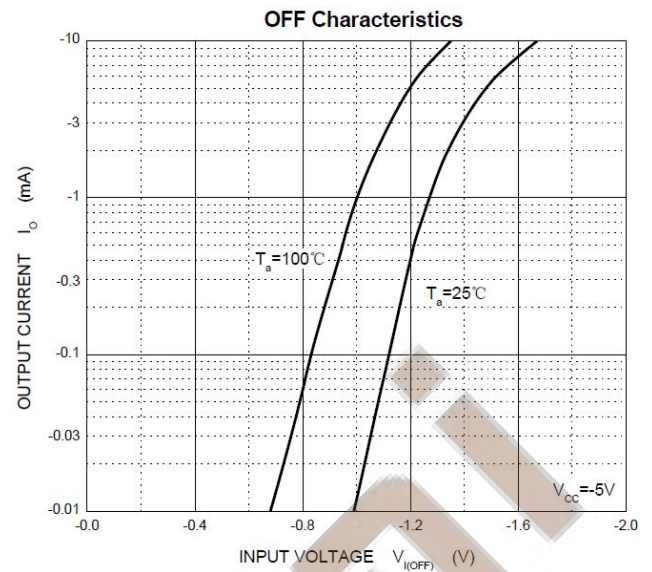
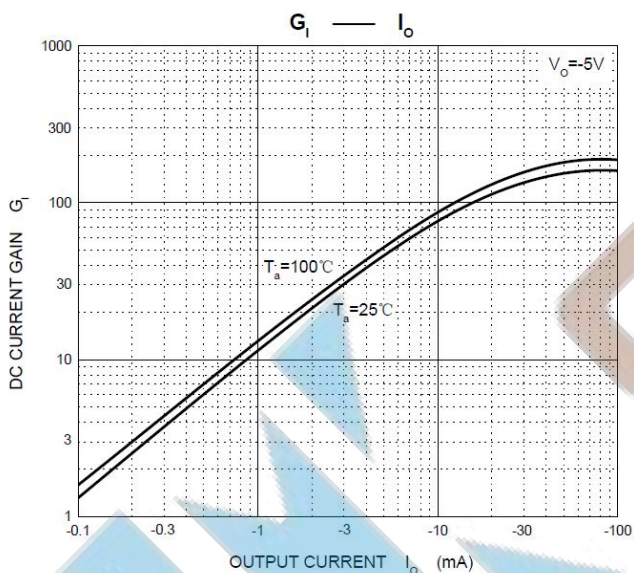
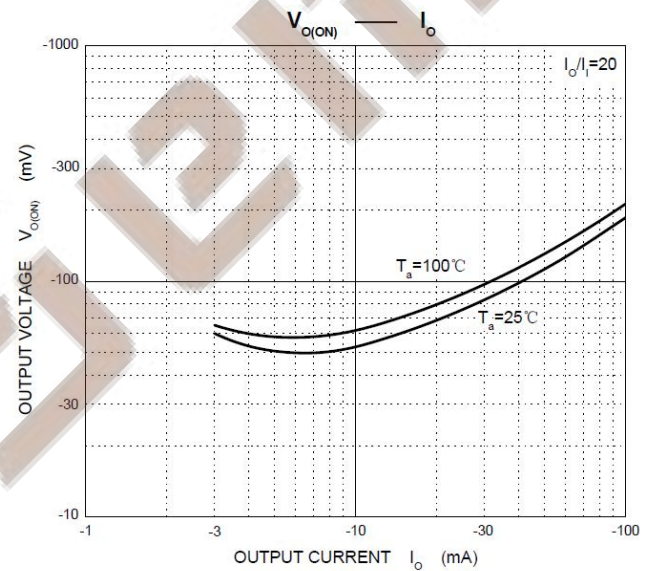
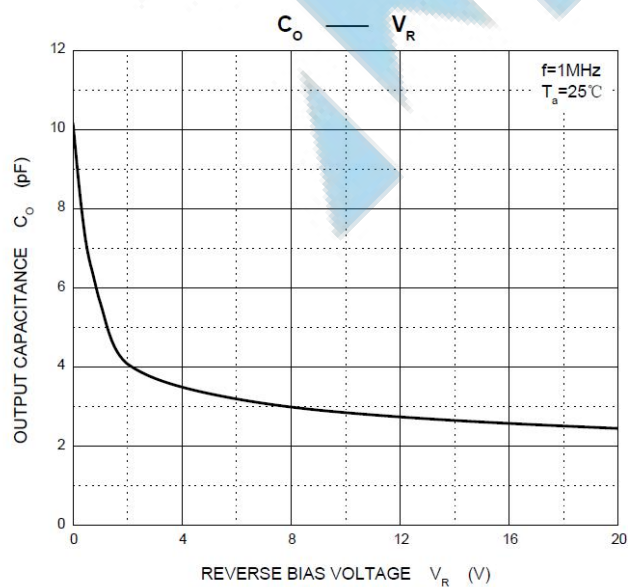
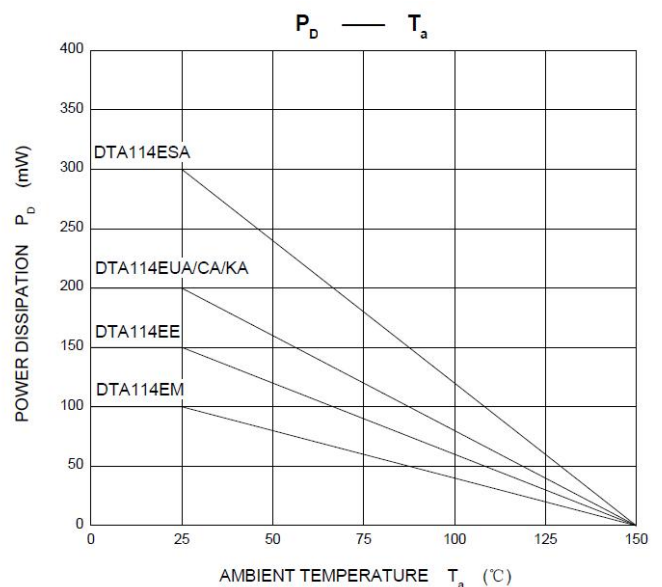
Product ID	Package	Marking	Qty(PCS)
DTA114EKA	SOT-23-3L	14	3000

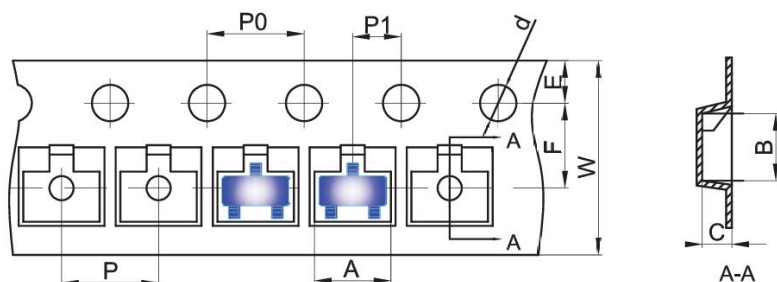
Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Parameters	Symbols	Limits	Units
Supply Voltage	VCC	-50	V
Input Voltage	VIN	-40~+10	V
Output Current	IO	-50	mA
Peak Collector Current	ICM	-100	mA
Power Dissipation	PC	200	mW
Junction Temperature	Tj	-55~+150	°C

Electrical Characteristics(Ta=25°C unless otherwise noted)

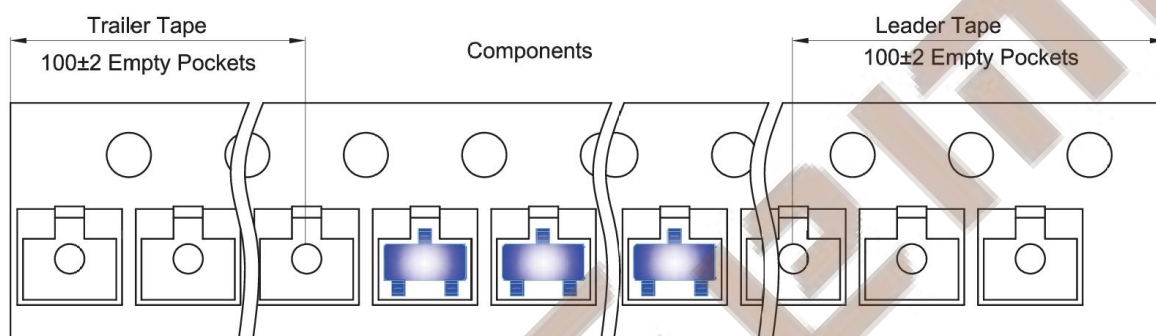
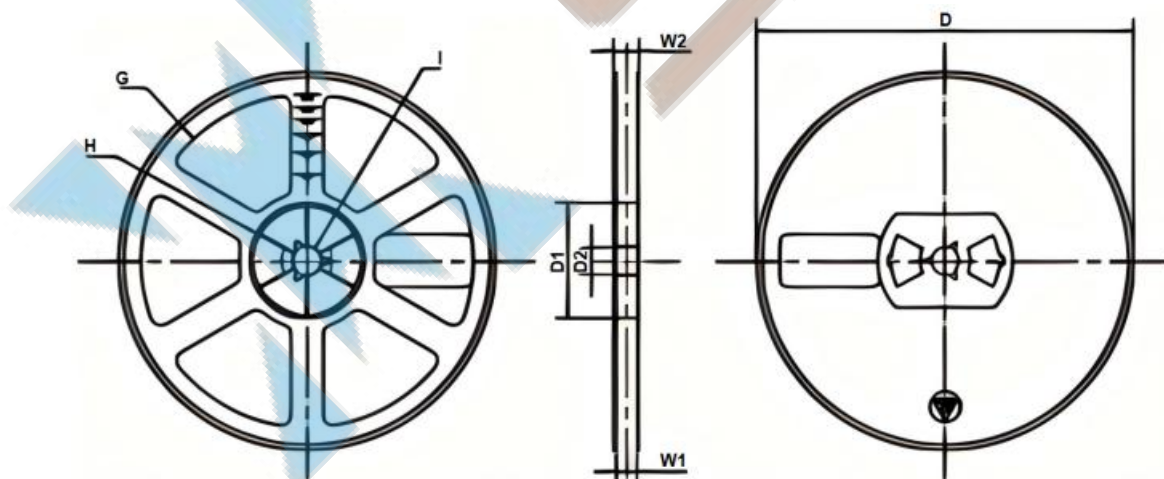
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Input on voltage	VI(ON)	VO=-0.3V, IO=-10mA			-3	V
	VI(OFF)	VCC=-5V, IO=-0.1mA	-0.5			V
Output voltage	VO(on)	IO/II=-10mA/-0.5mA			-0.3	V
Input current	II	VI=-5V			-0.88	mA
Output current	IO(off)	VCC=-50V, VI=0			-0.5	uA
DC current gain	GI	VO=-5V, IO=-5mA	30			
Input resistor	R1	-	7	10	13	kΩ
Resistor ratio	R2/R1	-	0.8	1	1.2	
Transition frequency	fT	VO=-10V, IO=-5mA, f=100MHz		250		MHz

Typical characteristics


Package Information
Carrier Dimension(mm)


Dimensions are in millimeter

Pkg Type	A	B	C	d	E	F	P0	P	P1	W
SOT-23-3L	3.18	3.28	1.32	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00


Reel Dimension(mm)


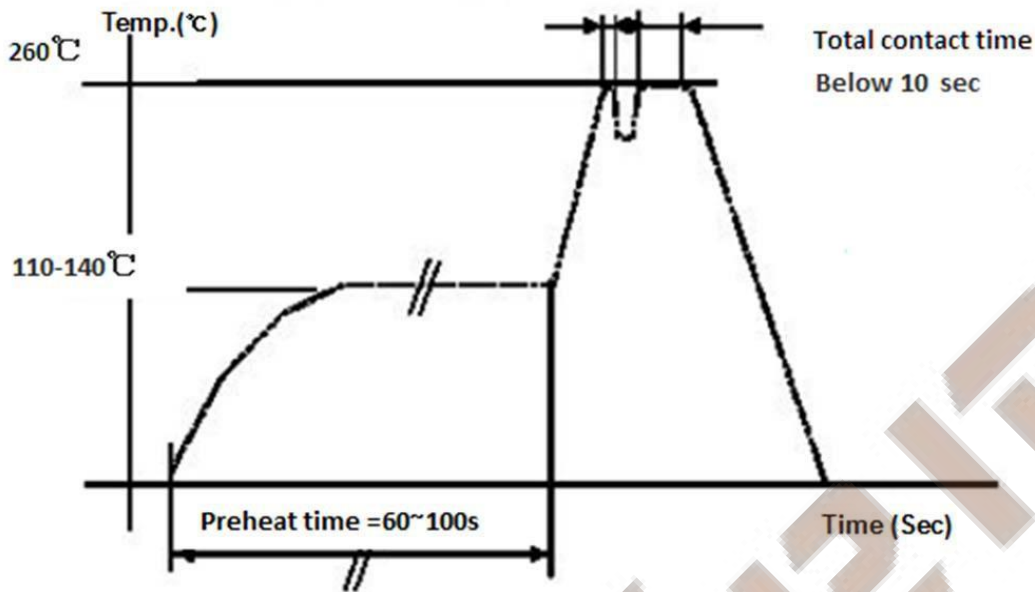
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Φ178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30
Tolerance	±2	±1	±1	±1	±1	±1	±1	±1

Package Specifications

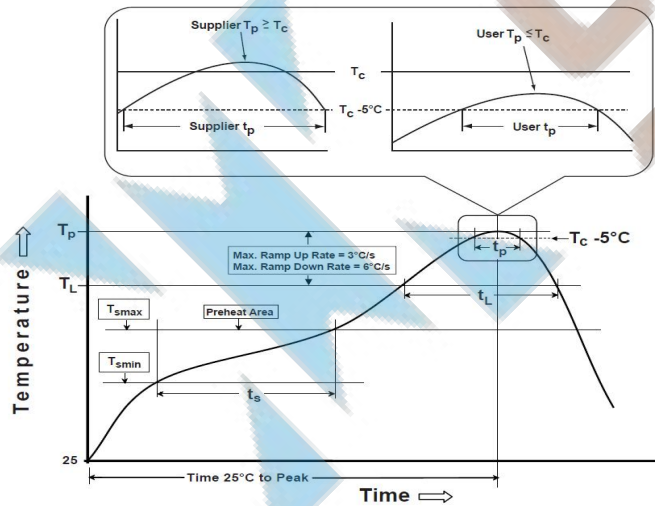
Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT-23-3L	7'	178	3	210*208*203	45	440*400*230	180

Recommended Soldering Profile for Rectifier Diodes (Pb Free)

a) Wave Soldering Profile



b) Reflow Soldering Profile (Pb Free Application), refer to IPC/JEDEC J-STD-020

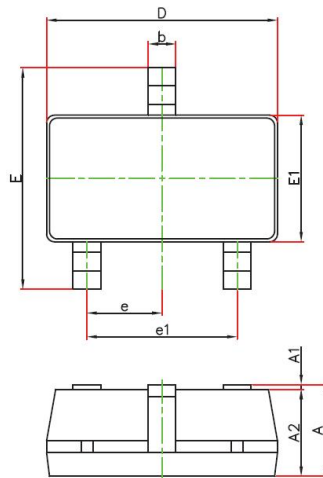
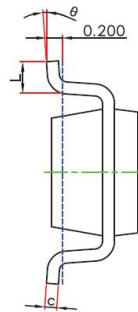


Preheat/Soak Temperature Min (T _{smin}) Temperature Max (T _{smax}) Time (ts) from (T _{smin} to T _{smax})	50 °C 200 °C 60-120 seconds
Melting Point of Solder (Sn Ag Cu)	217°C
Ramp-up Rate to 217°C(Melting Point of Solder)	3°C/sec
Time at Temp.>217°C (Melting Point of Solder)	60~150 Sec
Peak Temperature	255±5°C
Time within 5°Cbelow Peak Temp.	20~40 Sec
Cooling Rate	6°C/sec (max)
Time from 25°C to Peak Temp.	8min (max)

c) Manual Soldering

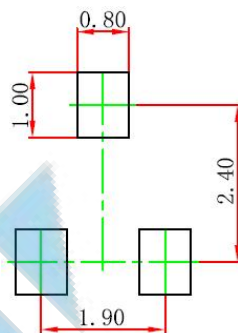
When using an electric soldering iron for manual soldering, it is recommended that the temperature does not exceed 300°C and the soldering time is less than 10 seconds.

Package Mechanical Data



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	1.500	1.700	0.059	0.067
E	2.650	2.950	0.104	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Disclaimer

The information presented in this document is for reference only. Yancheng **Xirun Semiconductor Co., Ltd** reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), **Xirun Semiconductor** or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.x-semi.cn](http://www.x-semi.cn) , or consult your nearest **Xirun Semiconductor's** sales office for further assistance.