

Pb Free Plating Product

## L4206S



20Amperes,600Volts Insulated Common Cathode Ultra Fast Recovery Rectifiers

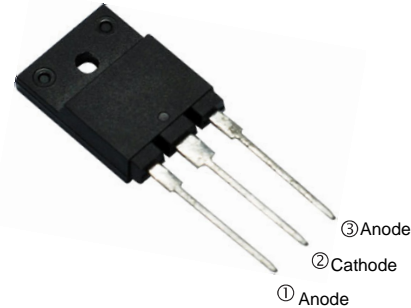
**APPLICATION**

- Freewheeling, Snubber, Clamp
- Inversion Welder
- PFC
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- UPS

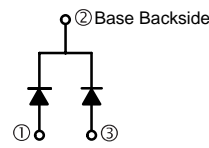
**PRODUCT FEATURE**

- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current

## TO-3PF(TO-3PML)



Internal Configuration

**GENERAL DESCRIPTION**

L4206S using the latest FRED FAB process(planar passivation chip) with ultrafast and soft recovery characteristic.

**Absolute Maximum Ratings**

Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	$V_{RRM}$		600	V
Continuous forward current(total device)	$I_{F(AV)}$	$T_c = 110^\circ\text{C}$	20	A
Single pulse forward current(total device)	$I_{FSM}$	$T_c = 25^\circ\text{C}$	160	
Maximum repetitive forward current	$I_{FRM}$	Square wave, 20kHz	60	
Operating junction	$T_j$		175	$^\circ\text{C}$
Storage temperatures	$T_{stg}$		-55 to +175	$^\circ\text{C}$

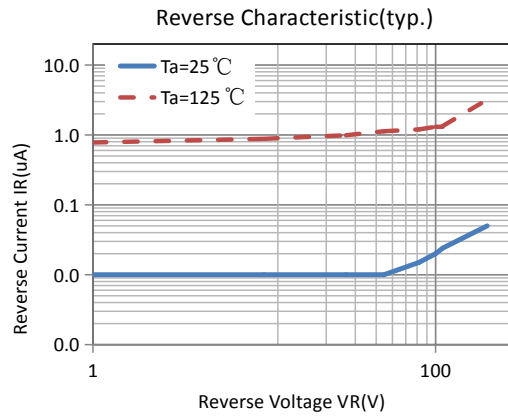
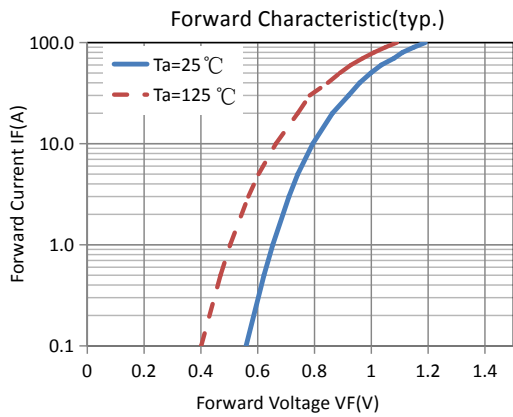
**Electrical characteristics (Ta=25°C unless otherwise specified)**

Parameter	Symbol	Test Conditions	Min	Typ.	Max.	Units
Breakdown voltage Blocking voltage	$V_{BR}, V_R$	$I_R = 100\mu\text{A}$	600			V
Forward voltage (Per Diode)	$V_F$	$I_F = 10\text{A}$ $I_F = 10\text{A}, T_j = 125^\circ\text{C}$		1.35 1.10	1.60 1.40	
Reverse leakage current(Per Diode)	$I_R$	$V_R = V_{RRM}$ $T_j = 150^\circ\text{C}, V_R = 600\text{V}$			20 200	$\mu\text{A}$
Reverse recovery time(Per Diode)	$t_{rr}$	$I_F = 0.5\text{A}, I_R = 1\text{A}, I_{RR} = 0.25\text{A}$ $I_F = 1\text{A}, V_R = 30\text{V}, di/dt = 200\text{A}/\mu\text{s}$		35 27	45 35	ns

**Thermal characteristics**

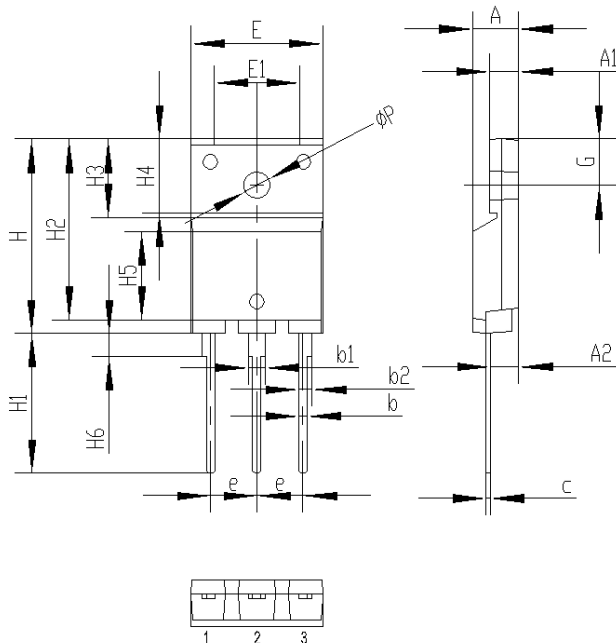
Parameter	Symbol	Typ	Units
Junction-to-Case	$R_{\theta JC}$	1.2	$^\circ\text{C}/\text{W}$

## Electrical performance (typical)



## Package Information

### TO-3PF PACKAGE



	mm		
	MIN	NOM	MAX
A	5.3	5.5	5.7
A1	3.25	3.45	3.65
A2	3.15	3.35	3.55
b	0.85	1.0	1.15
b1	1.85	2.0	2.15
b2	1.45	1.6	1.75
c	0.4	0.5	0.6
e	5.3	5.45	5.6
E	15.40	15.60	15.80
E1	10.00	10.20	10.40
H	22.80	23.00	23.20
H1	16.00	16.50	17.00
H2	21.20	21.40	21.60
H3	9.10	9.30	9.50
H4	8.55	8.75	8.95
H5	10.20	10.40	10.60
H6	2.55	2.70	2.85
G	5.3	5.5	5.7
ØP	3.05	3.2	3.35