

Pb Free Plating Product

## MUR4030PT



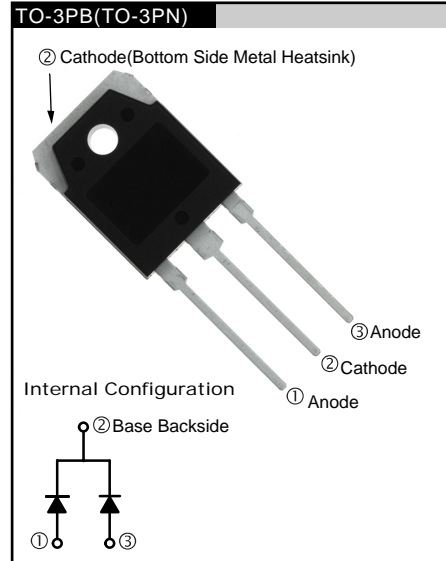
40Ampere,300Volt Planar Polyimide Passivated Ultra Fast Recovery Rectifier

### 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



### GENERAL DESCRIPTION

MUR4030PT using the latest FRED wafer FAB process(planar passivated pellet) with ultrafast and soft recovery characteristic.

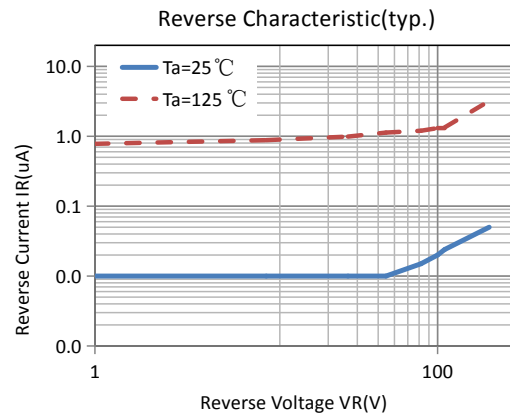
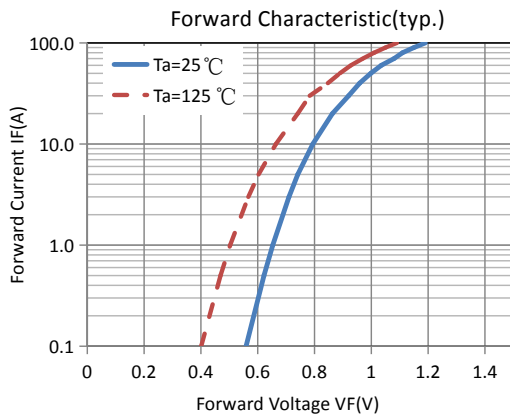
Absolute Maximum Ratings				
Parameter	Symbol	Test Conditions	Values	Units
Repetitive peak reverse voltage	$V_{RRM}$		300	V
Continuous forward current	$I_{F(AV)}$	$T_c = 110^\circ\text{C}$	40	A
Single pulse forward current	$I_{FSM}$	$T_c = 25^\circ\text{C}$	400	
Maximum repetitive forward current	$I_{FRM}$	Square wave, 20kHz	100	
Operating junction	$T_j$		175	$^\circ\text{C}$
Storage temperatures	$T_{stg}$		-55 to +175	$^\circ\text{C}$

Electrical characteristics ( $T_a=25^\circ\text{C}$ unless otherwise specified)						
Parameter	Symbol	Test Conditions	Min	Typ.	Max.	Units
Breakdown voltage Blocking voltage	$V_{BR}, V_R$	$I_R=100\mu\text{A}$	300			V
Forward voltage (Per Diode)	$V_F$	$I_F=20\text{A}$		0.99	1.20	
		$I_F=20\text{A}, T_j=125^\circ\text{C}$		0.92	1.00	
Reverse leakage current(Per Diode)	$I_R$	$V_R=V_{RRM}$			10	$\mu\text{A}$
		$T_j=150^\circ\text{C}, V_R=300\text{V}$			100	
Reverse recovery time(Per Diode)	$t_{rr}$	$I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$		30	40	ns
		$I_F=1\text{A}, V_R=30\text{V}, di/dt=200\text{A}/\mu\text{s}$		22	35	

### Thermal characteristics

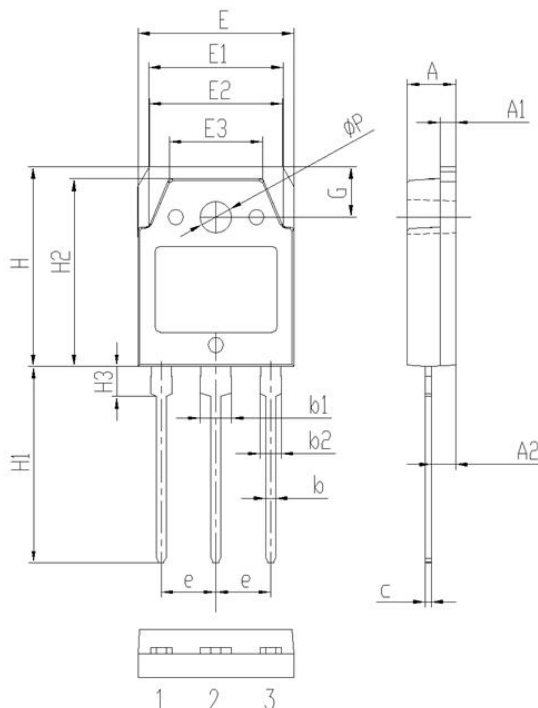
Paramter	Symbol	Typ	Units
Junction-to-Case	$R_{\theta JC}$	0.8	$^\circ\text{C}/\text{W}$

## Electrical performance (typical)



## Package Information

### TO-3PB PACKAGE



Symbol	Dimensions (millimeters)	
	Min.	Max.
A	4.60	5.00
A1	1.30	1.70
A2	2.20	2.60
b	0.80	1.20
b1	2.90	3.30
b2	1.90	2.30
c	0.40	0.80
e	5.25	5.65
E	15.3	15.7
E1	13.2	13.6
E2	13.1	13.5
E3	9.10	9.50
H	19.7	20.1
H1	19.1	20.1
H2	18.3	18.7
H3	2.80	3.20
G	4.80	5.20
$\Phi P$	3.00	3.40