

BRMUR3060PT

Rev.A Dec.-2016

描述 / Descriptions

TO-3P 塑封封装 超快恢复二极管。

Ultrafast Recovery Diode in a TO-3P Plastic Package.

特征 / Features

极快的恢复时间，采用 TO-3P 封装，极低的正向压降，极小的反向漏电流，600V 耐压。

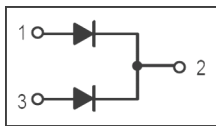
Ultrafast recovery time, popular TO-3P package, low forward voltage, low leakage current, reverse voltage to 600V.

用途 / Applications

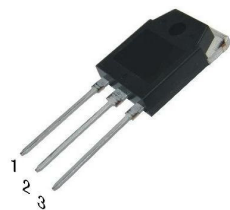
该产品可用于高频脉宽调制电路中的输出整流和续流，因其具有反向恢复电荷少恢复时间快的特点，所以能明显减少电路的开关损耗。

These devices are intended for output rectifiers and flywheel diodes in a variety of high-frequency pulse-width modulated switching regulators. Their low stored charge and attendant fast reverse-recovery behavior minimize electrical noise generation and in many circuits markedly reduce the turn-on dissipation of associated power switching transistors.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Anode PIN2 : Cathode PIN 3 : Anode

放大及印章代码 / h_{FE} Classifications & Marking

见印章说明。 See Marking Instructions

极限参数 / Absolute Maximum Ratings(Ta=25°C)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Peak Repetitive Reverse Voltage	V_{RRM}	600	V
Average Forward Current(Per diode)	$I_{F(AV)}$	15	A
Average Forward Current(Per device)		30	A
Forward RMS Current	$I_{F(RMS)}$	30	A
Surge non repetitive forward current($t_p=10ms$ sinusoidal)	I_{FSM}	140	A
Typical Thermal Resistance Junction to Case	$R_{\theta Jc}$	0.85	°C/W
Coupling	$R_{th(c)}$	0.2	°C/W
Operating Junction Temperature Range	T_j	175	°C
Storage Temperature Range	T_{stg}	-65~+175	°C

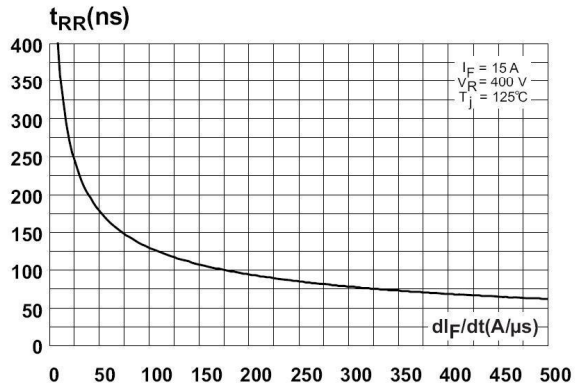
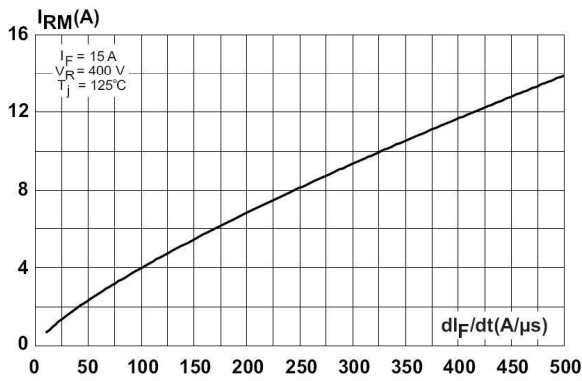
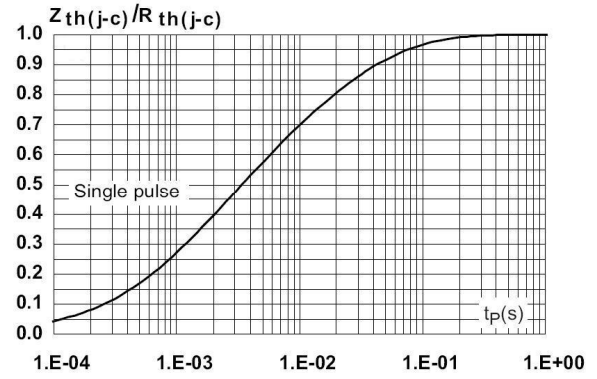
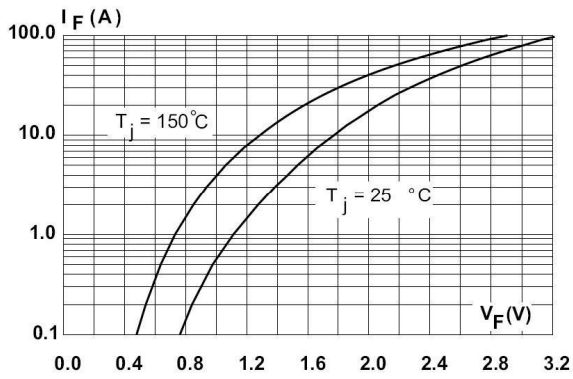
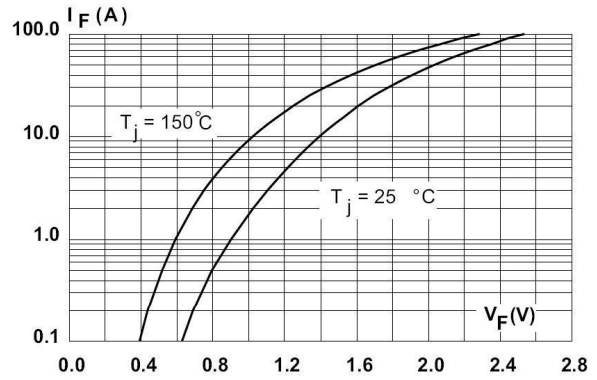
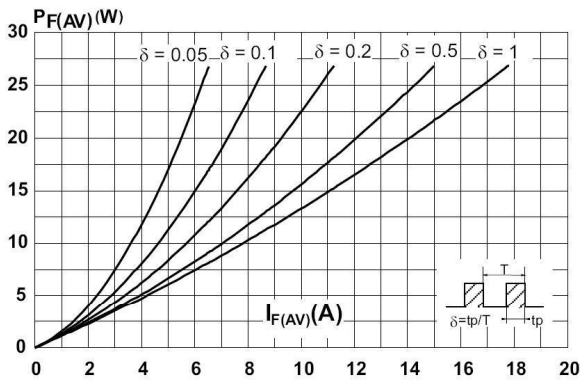
电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Forward Voltage ⁽²⁾	V_F	$I_F=15A$ $T_C=25^\circ C$			1.95	V
		$I_F=15A$ $T_C=150^\circ C$		1.15	1.45	
		$I_F=30A$ $T_C=25^\circ C$			2.25	
		$I_F=30A$ $T_C=150^\circ C$		1.42	1.80	
Instantaneous Reverse Current ⁽¹⁾	I_R	$V_R=600V$ $T_a=25^\circ C$			10	μA
		$V_R=600V$ $T_a=150^\circ C$		40	400	
Reverse recovery current	I_{RM}	$I_F=15A$ $V_R=400V$ $di_F/dt=100A/\mu s$ $T_j=125^\circ C$		4.0	5.5	A
Reverse Recovery Time	t_{rr}	$I_F=0.5A$ $I_R=1.0A$ $I_{RR}=0.25A$		35		ns
		$I_F=1.0A$ $V_R=30V$ $di_F/dt=50A/\mu s$		45		
Forward recovery time	t_{fr}	$I_F=15A$ $V_{FR}=1.9V$ $di_F/dt=100A/\mu s$			100	ns
Forward recovery voltage	V_{FP}	$T_j=25^\circ C$		2.5		V

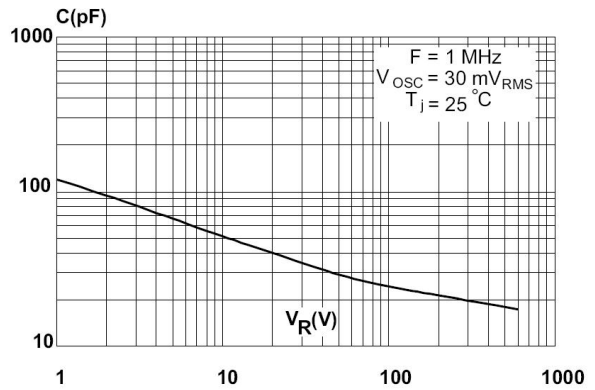
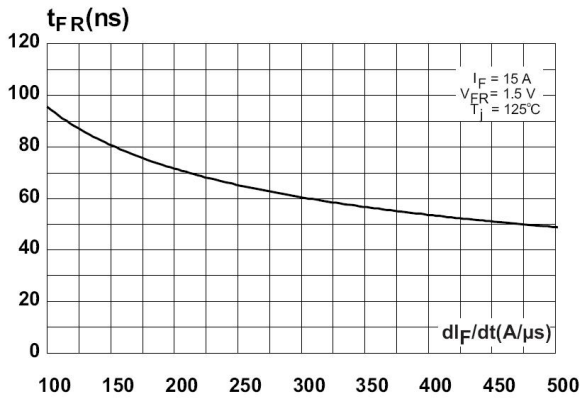
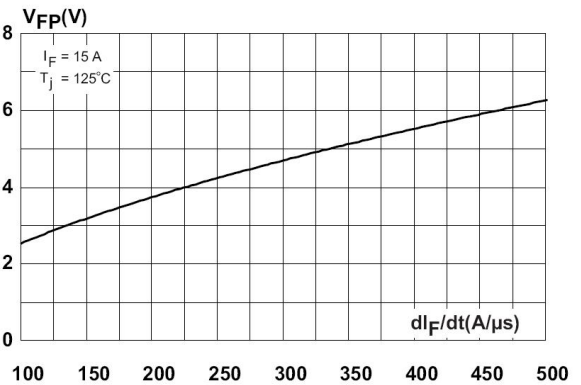
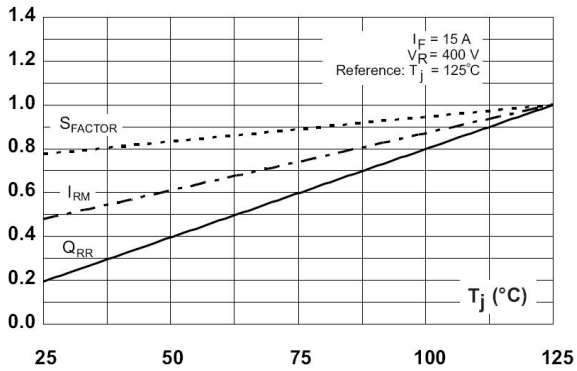
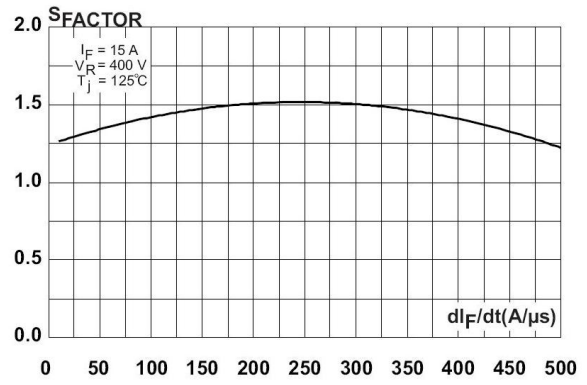
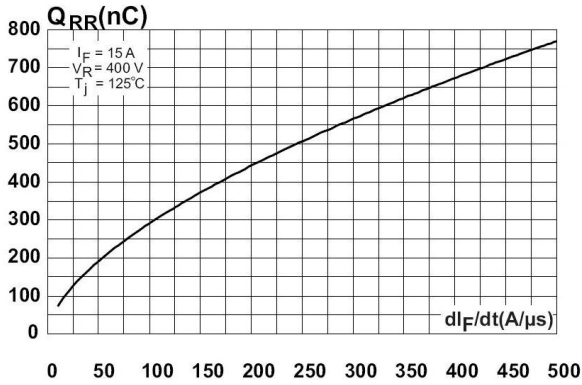
注/Notes:

1. Pulse test: $t_p = 5 ms$, $\xi < 2\%$
2. Pulse test: $t_p = 380 \mu s$, $\xi < 2\%$

电参数曲线图 / Electrical Characteristic Curve



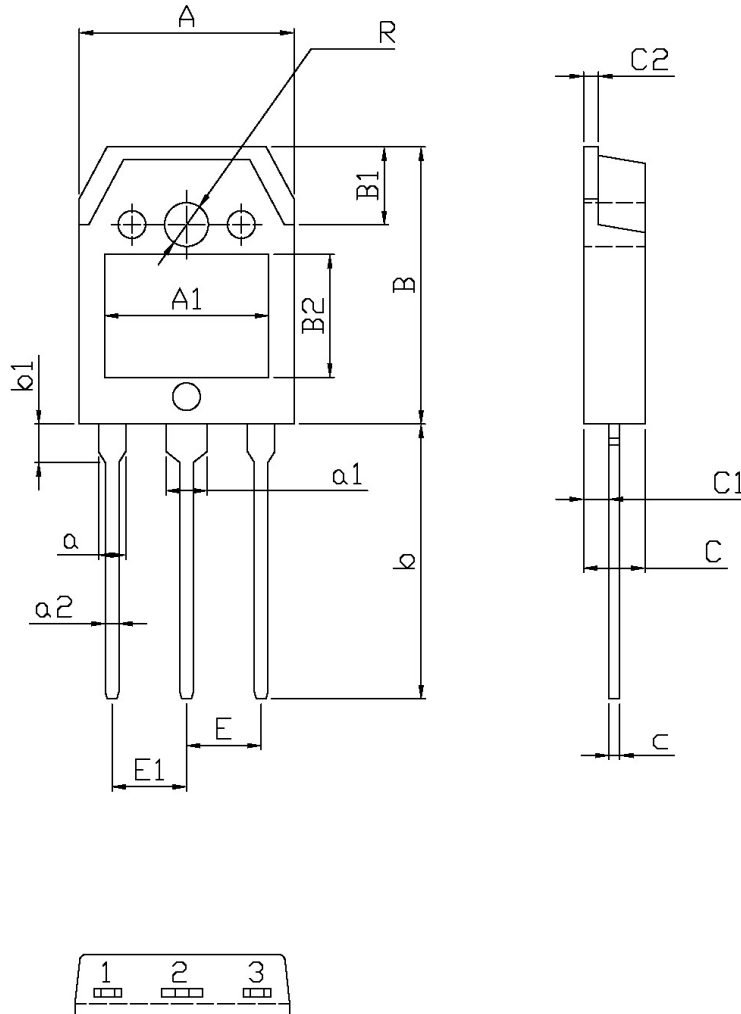
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

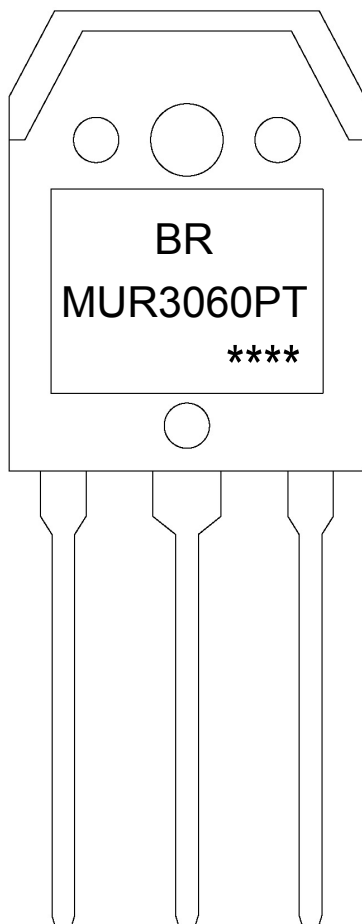
T0-3P

单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	15.4	16.0	a2	0.8	1.2
R	3.1	3.5	E	5.45	
B	19.8	20.8	E1	5.45	
B1	5.5	5.9	C	4.3	4.7
B2	9.0		C1	1.2	1.6
A1	12.0		C2	1.4	1.6
b	19.6	20.6	c	0.5	0.7
b1	3.0	3.4			
a	1.8	2.2			
a1	2.8	3.2			

印章说明 / Marking Instructions



说明：

BR： 为公司代码

MUR3060PT： 为产品型号

****： 为生产批号代码，随生产批号变化。

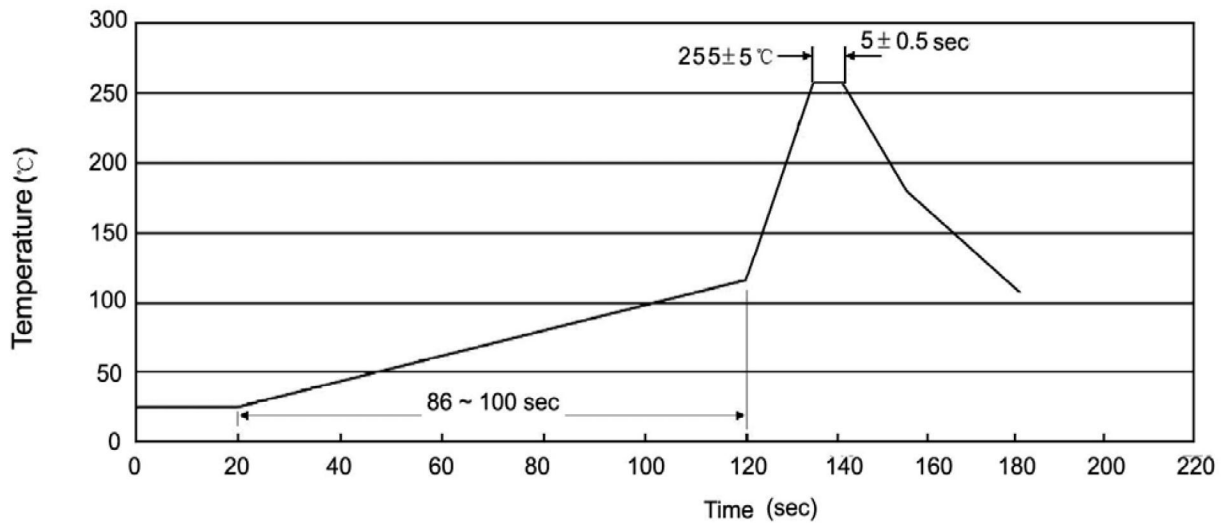
Note:

BR: Company Code

MUR3060PT: Product Type.

****: Lot No. Code, code change with Lot No.

波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)



说明：

- 1、预热温度 25 ~ 150°C，时间 60 ~ 90sec;
- 2、峰值温度 255±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：270±5°C

时间：10±1 sec.

Temp.:270±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

套管包装 / TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-3P	30	15	450	5	2250	497.5×46×8	555×164×50	575×290×180

使用说明 / Notices