

/ Descriptions

WR0553DF

Ultrafast Recovery Diode in a TO-220AC Plastic Package.

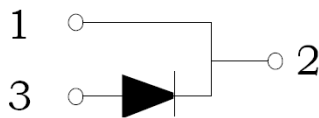
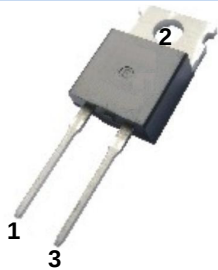
/ Features

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

/ Applications

XSV

Freewheeling, Snubber, Clamp, Inversion Welder, Plating Power Supply, Ultrasonic Cleaner and Welder, Converter, UPS.

/ Equivalent Circuit**/ Pinning**

PIN1 2 Cathode

PIN 3 Anode

/ h_{FE} Classifications & Marking

See Marking Instructions.

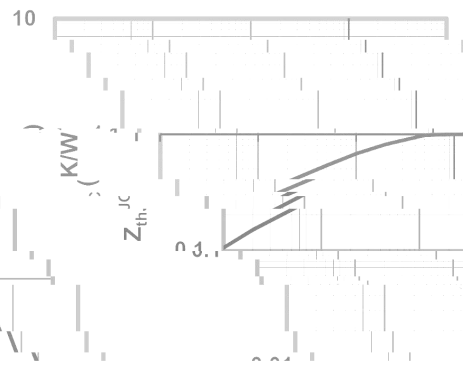
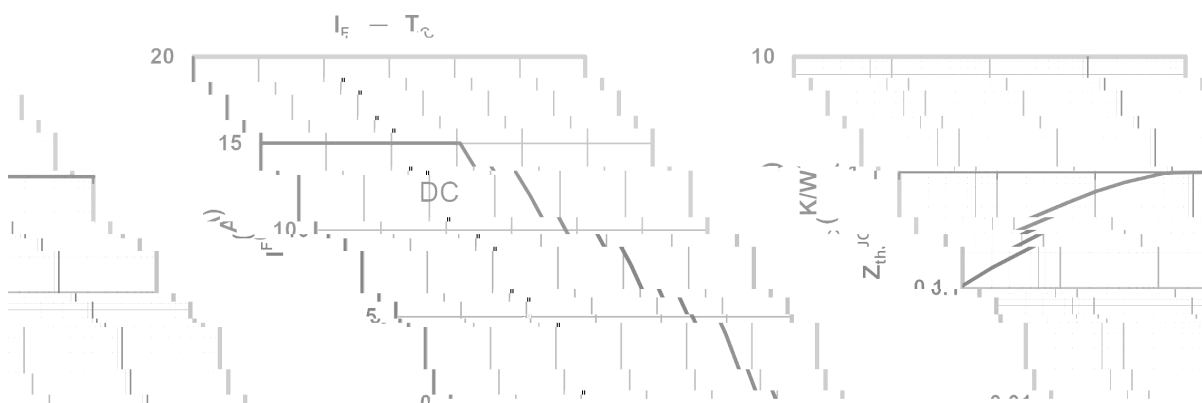
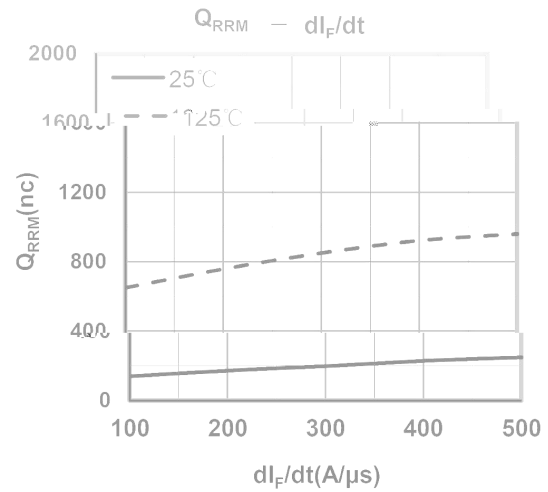
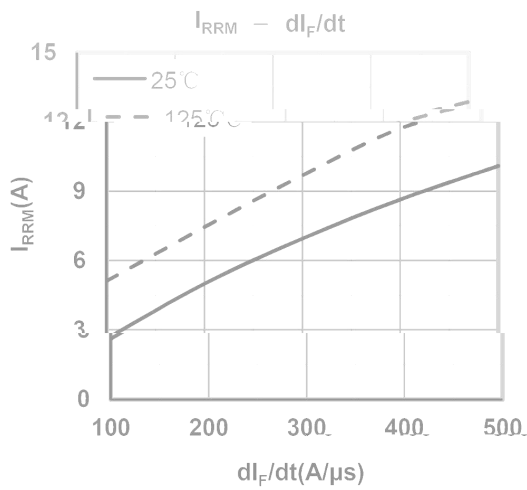
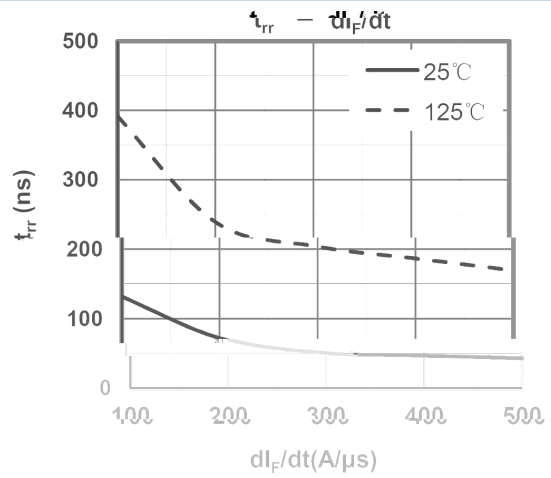
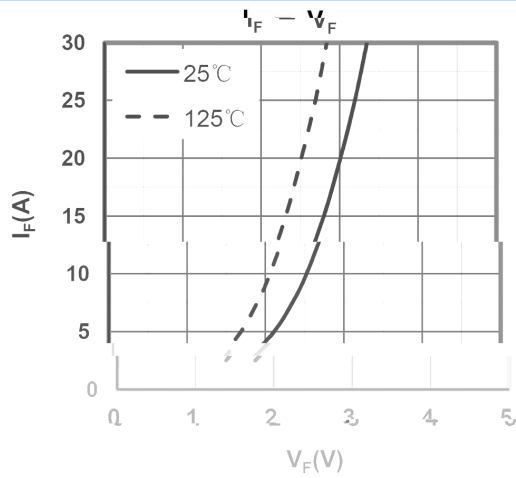
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	1200	V
Peak Reverse Voltage	V_R	1200	V
Average Rectified Forward Current	$I_{F(AV)}$ ($T_c=110^\circ\text{C}$)	15	A
Average Rectified Forward Current(RMS)	$I_{F(RMS)}$ ($T_c=110^\circ\text{C}$)	21	A
Non Repetitive Peak Surge Current($T_j=45^\circ\text{C}$, $t=10\text{ms}$, 50Hz, Sine)	I_{FSM}	150	A
Power Dissipation	P_D	125	W
Thermal Resistance Junction to Case	$R_{\theta JC}$	1.0	$^\circ\text{C/W}$
Junction Temperature	T_j	-55 +150	
Storage Temperature Range	T_{stg}	-55 +125	

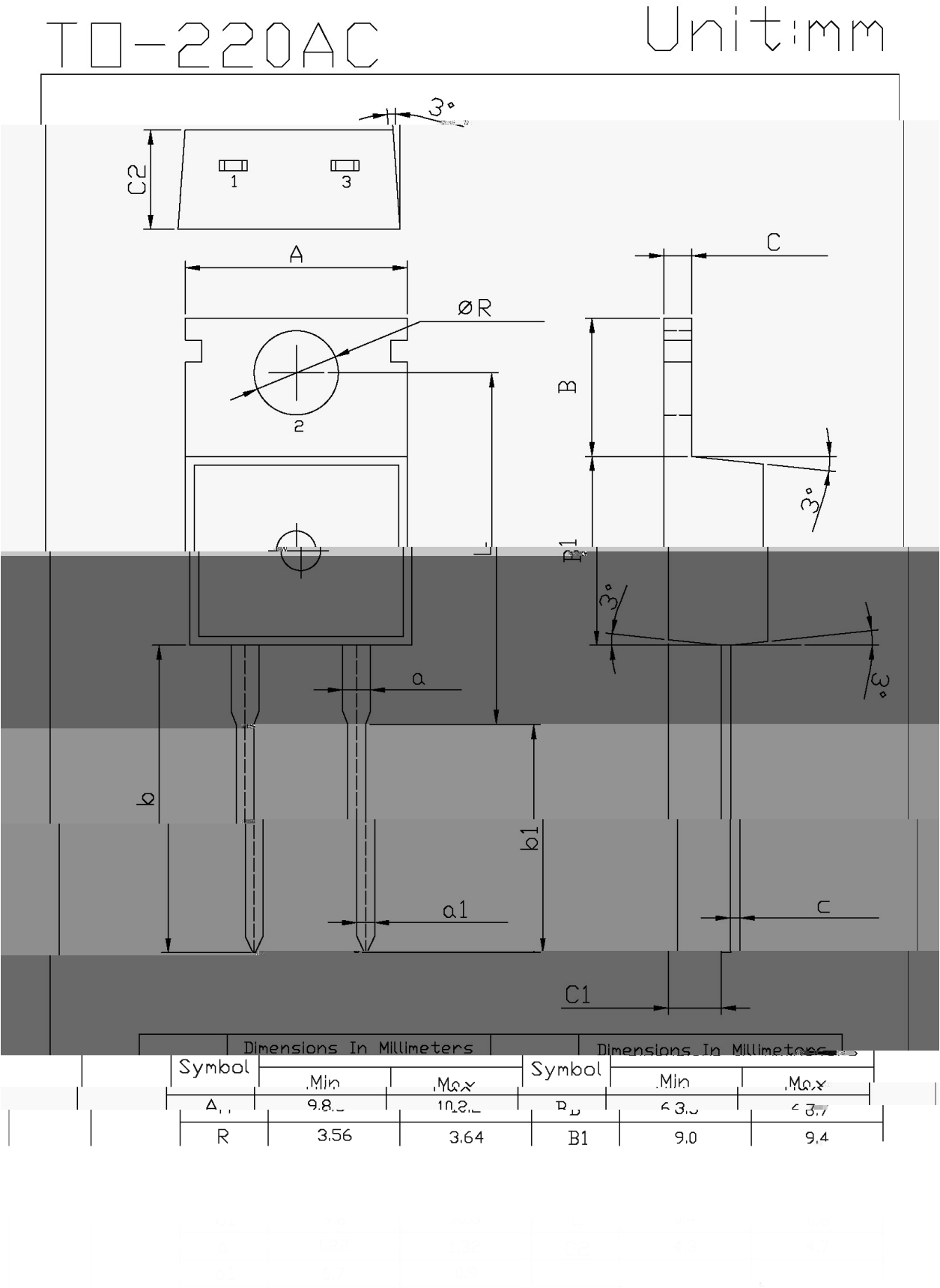
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=15\text{A}$		2.8	3.2	V
		$I_F=15\text{A}$ $T_j=125^\circ\text{C}$		2.3		V
Maximum Instantaneous Reverse Current	I_{RM}	$V_R=1200\text{V}$			10	μA
		$V_R=1200\text{V}$ $T_j=125^\circ\text{C}$			1	mA
Reverse Recovery Time	t_{rr}	$I_F=1\text{A}$ $V_R=30\text{V}$ $diF/dt=-200\text{A}/\mu\text{s}$		25	30	ns
		$I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{RR}=0.25\text{A}$		35	40	ns
		$V_R=600\text{V}$ $I_F=15\text{A}$ $diF/dt=-200\text{A}/\mu\text{s}$		72		ns
Peak Repetitive Reverse Current	I_{RRM}	$V_R=600\text{V}$, $I_F=15\text{A}$ $diF/dt=-200\text{A}/\mu\text{s}$, $T_j=125^\circ\text{C}$		5.0		A
Reverse Recovery Time	t_{rr}	$V_R=600\text{V}$, $I_F=15\text{A}$ $diF/dt=-200\text{A}/\mu\text{s}$, $T_j=125^\circ\text{C}$		240		ns
Peak Repetitive Reverse Current	I_{RRM}	$V_R=600\text{V}$, $I_F=15\text{A}$ $diF/dt=-200\text{A}/\mu\text{s}$, $T_j=125^\circ\text{C}$		7.5		A

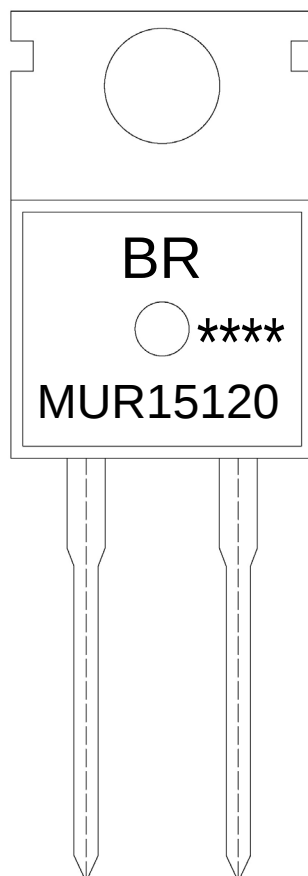
/ Electrical Characteristic Curve



I Package Dimensions



/ Marking Instructions



EU

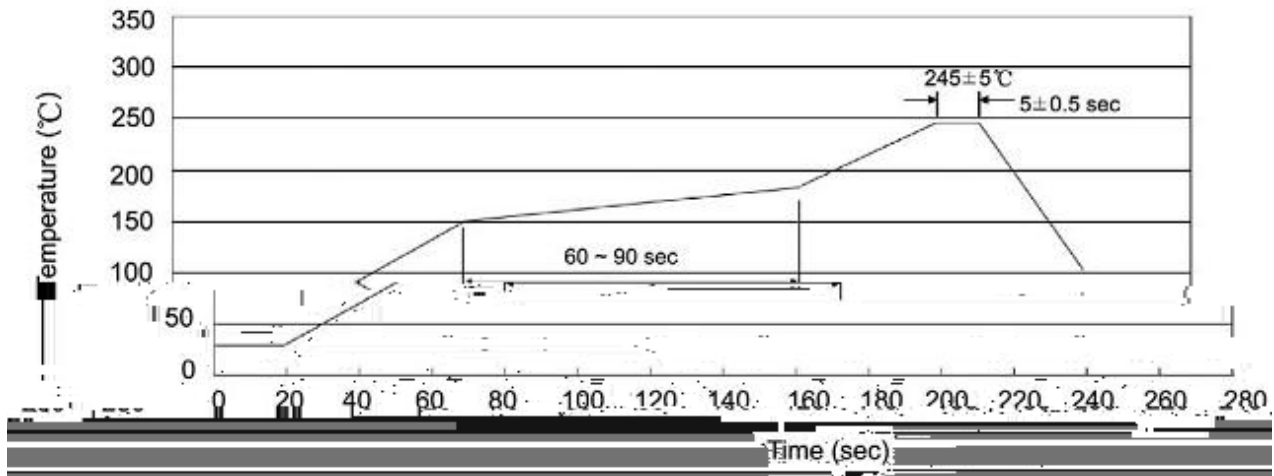
P XU48453

Note:

BR: Company Code

MUR15120 Product Type Code.

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


() / Temperature Profile for Dip Soldering(Pb-Free)


Note:

- | | | | | | |
|---|-----|------|----------|----------|---|
| 1 | 150 | 180% | 60 | 90sec; | 1.Preheating:150~180%, Time:60~90sec. |
| 2 | 255 | ±5% | 5 | ±0.5sec; | 2.Peak Temp.:255±5%, Duration:5±0.5sec. |
| 3 | | 2 | 10%/sec. | | 3. Cooling Speed: 2~10%/sec. |

/ Resistance to Soldering Heat Test Conditions

270±5% 10±1 sec. Temp.:270±5 Time:10±1 sec

/ Packaging SPEC.
/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-220/F/AC	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ 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-220/F/AC	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices