

/ Descriptions

WO-220DF

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

/ Features

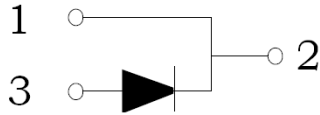
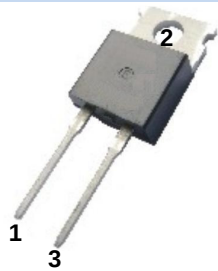
WO-220DF

600V

Ultrafast recovery time, popular TO-220AC package, low forward voltage, low leakage current, reverse voltage to 600V.

/ Applications

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.

/ Equivalent Circuit**/ Pinning**

PIN1 2 Cathode

PIN 3 Anode

/ h_{FE} Classifications & Marking

See Marking Instructions

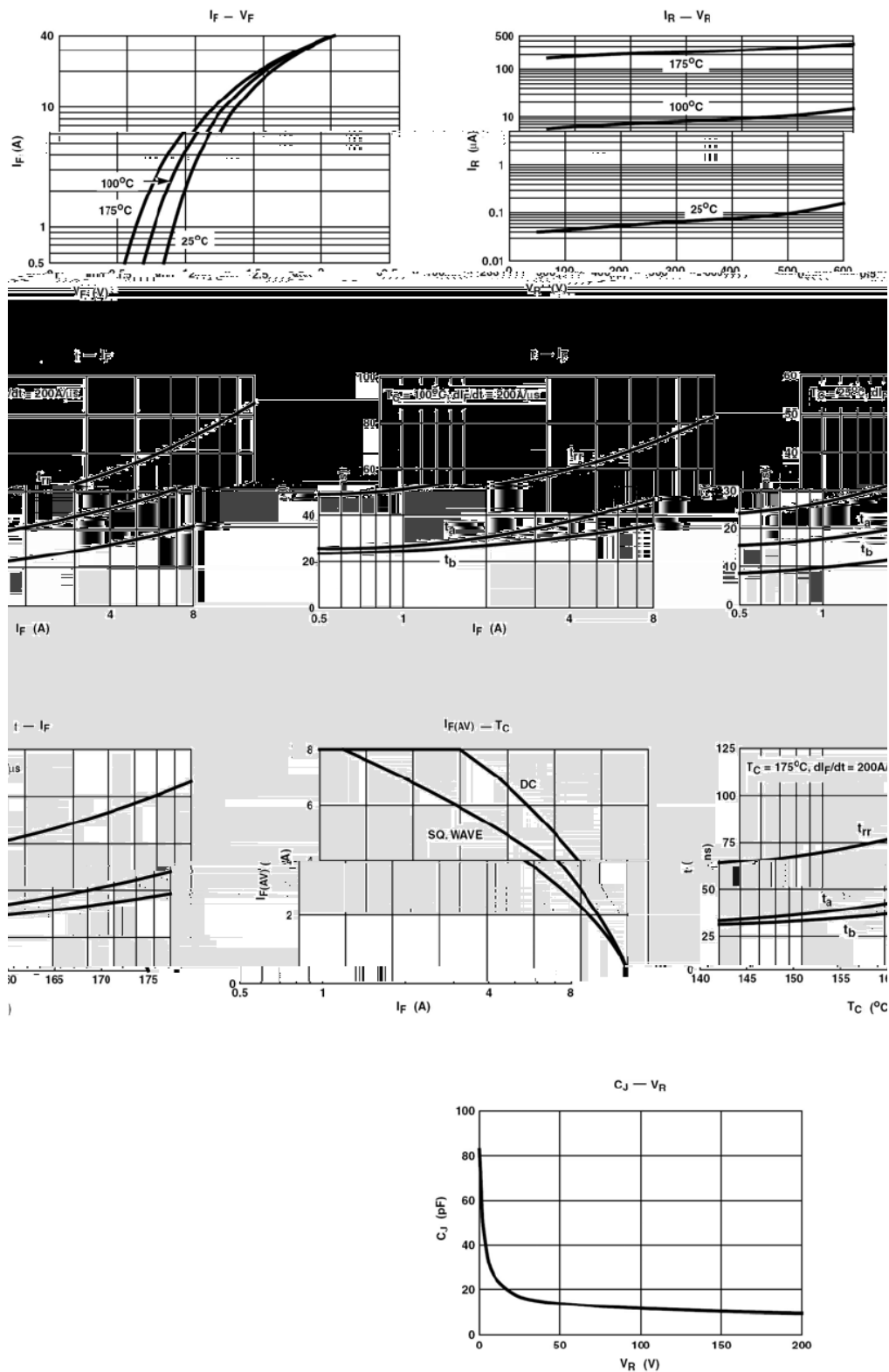
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	600	V
Working Peak Reverse Voltage	V_{RWM}	600	V
DC Blocking Voltage	V_R	600	V
Average Forward Current	I_F	8	A
Non Repetitive Peak Surge Current	I_{FRM}	16	A
Peak forward surge current	I_{FSM}	100	A
Power Dissipation	$P_{C(T_c=25^\circ\text{C})}$	75	W
Junction Temperature Range	T_j	150	
Storage Temperature Range	T_{stg}	-55~150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=8\text{A}$			1.5	V
		$I_F=8\text{A}$ $T_C=150$			1.2	V
Instantaneous Reverse Current	I_R	$V_R=600\text{V}$			100	μA
		$V_R=600\text{V}$ $T_C=150$			500	μA
Reverse Recovery Time	t_{rr}	$I_F=1\text{A}$ $dI_F/dt=200\text{A}/\mu\text{S}$			60	ns
		$I_F=8\text{A}$ $dI_F/dt=200\text{A}/\mu\text{S}$			70	ns
Time To Reach Peak Reverse forward current	t_a	$I_F=8\text{A}$ $dI_F/dt=200\text{A}/\mu\text{S}$		32		ns
Time From Peak IRM Projected zero crossing of IRM based on a straight line peak through 25%	t_b	$I_F=8\text{A}$ $dI_F/dt=200\text{A}/\mu\text{S}$		21		ns
Reverse Recovery charge	Q_{RR}	$I_F=8\text{A}$ $dI_F/dt=200\text{A}/\mu\text{S}$		195		nC
Junction Capacitance	C_J	$V_R=10\text{V}$ $I_F=0\text{A}$		25		pF

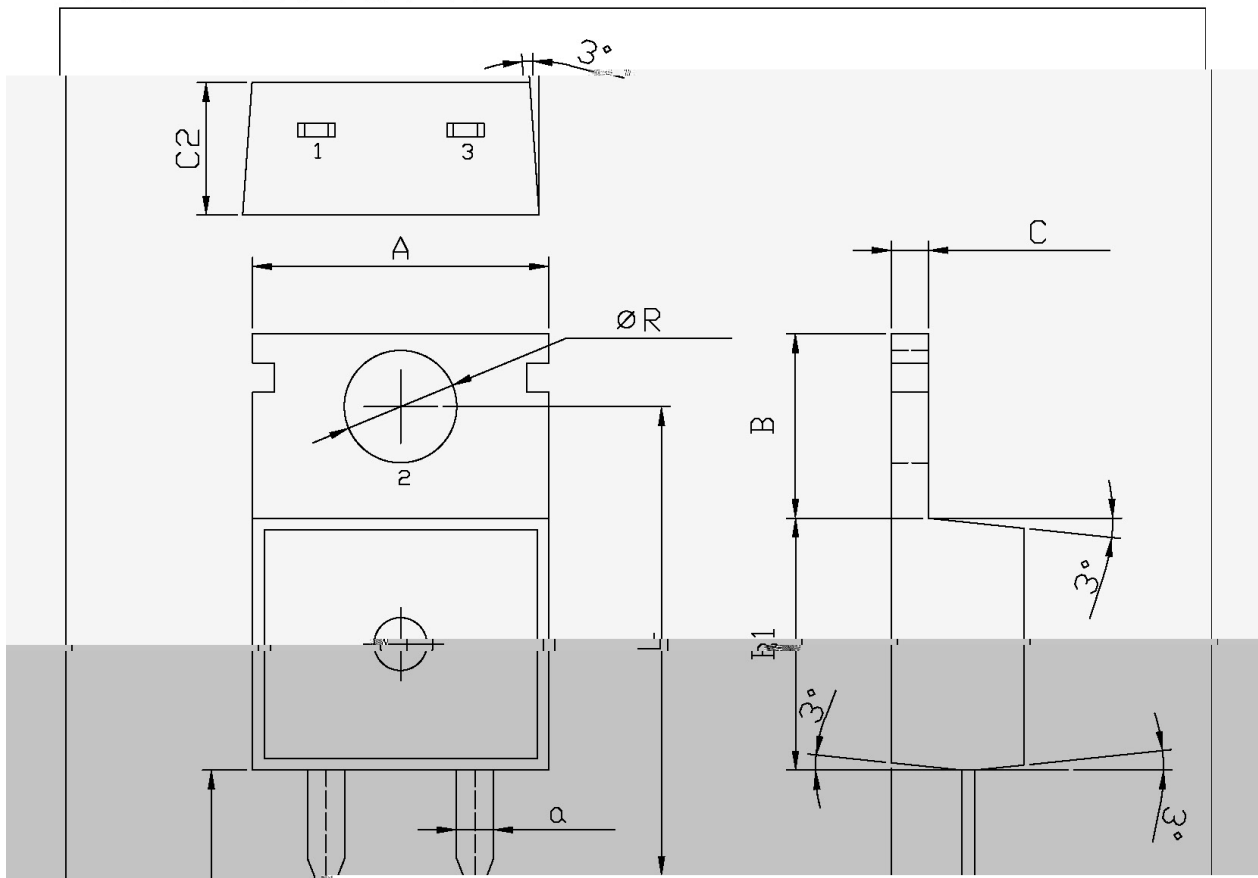
/ Electrical Characteristic Curve



/ Package Dimensions

TO-220AC

Unit:mm



/ Marking Instructions



ER

MXR860

Note:

BR:

Company Code

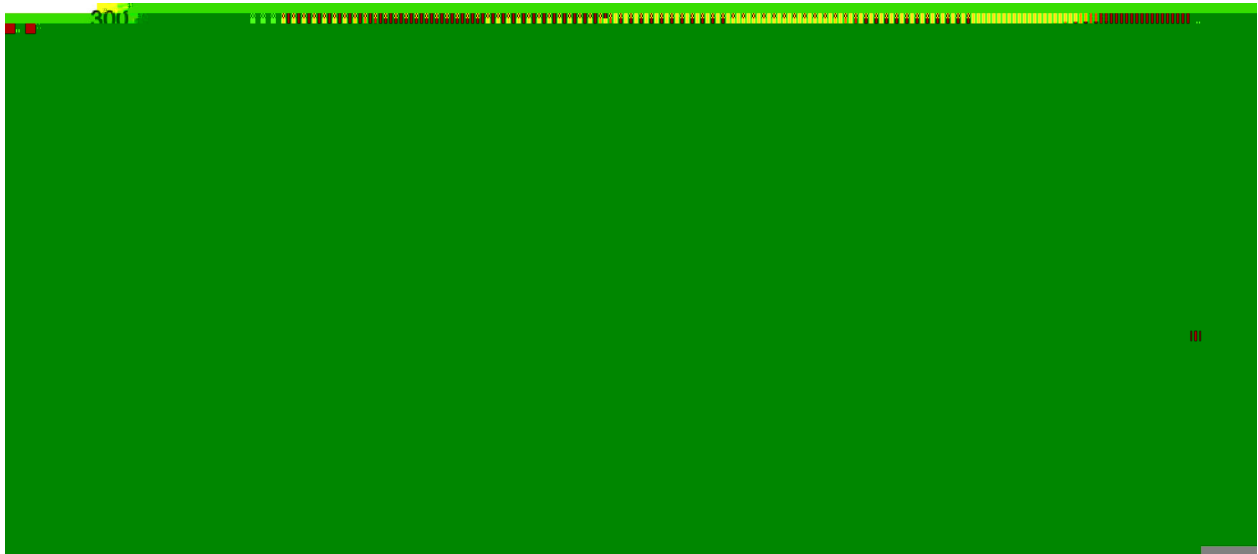
MUR860

Product Type.

****:

Lot No. Code, code change with Lot No.

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



Note:

- | | | | | | |
|---|-------|-----|-----------|---|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , 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	Units					Dimension (unit mm ³)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F/AC	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F/AC	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices