

/ Descriptions

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

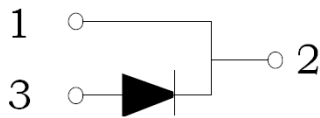
/ Features

Silicon epitaxial process to produce ultrafast recovery diode with low reverse leakage current and high reliability.

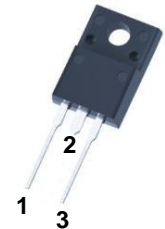
/ Applications

For high frequency, high voltage, high current rectifier diode, freewheeling diode.

/ Equivalent Circuit



/ Pinning



PIN1 2 Cathode PIN 3 Anode

/ h_{FE} Classifications & Marking

See Marking Instructions

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	600	V
RMS Voltage	V_{RMS}	420	V
DC Blocking Voltage	V_{DC}	600	V
Forward Current	I_F	1×8	A
Peak forward surge current	I_{FSM}	100	A
Typical Thermal Resistance Junction to Case	$R_{\theta Jc}$	4	/W
Junction Temperature Range	T_j	150	
Storage Temperature Range	T_{stg}	-55~150	

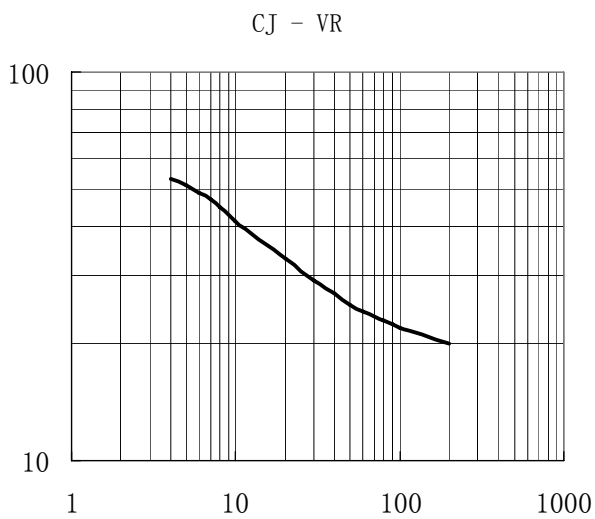
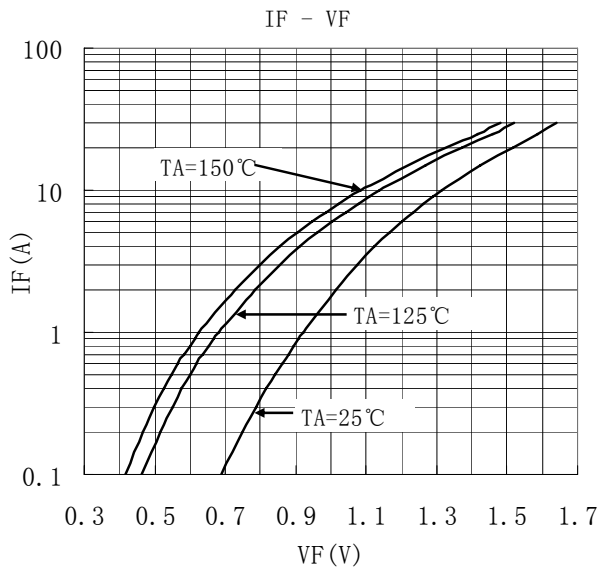
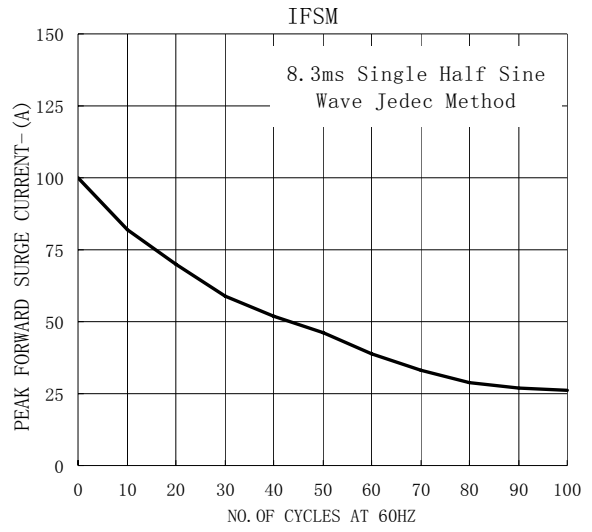
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Voltage	V_R	$I_R=1mA$	600			V
Forward Voltage	V_F	$I_F=1.0A$ $T_C=25^\circ C$		0.91	1.1	V
		$I_F=1.0A$ $T_C=125^\circ C$		0.69	0.8	
		$I_F=8A$ $T_C=25^\circ C$		1.28	1.5	
		$I_F=8A$ $T_C=125^\circ C$		1.13	1.35	
Instantaneous Reverse Current	I_R (Note 1)	$V_R=600V$ $T_a=25^\circ C$			10	μA
		$V_R=600V$ $T_a=125^\circ C$			500	
Reverse Recovery Time	t_{rr}	$I_F=0.5A$ $I_R=1.0A$ $I_{RR}=0.25A$			50	ns

Notes:

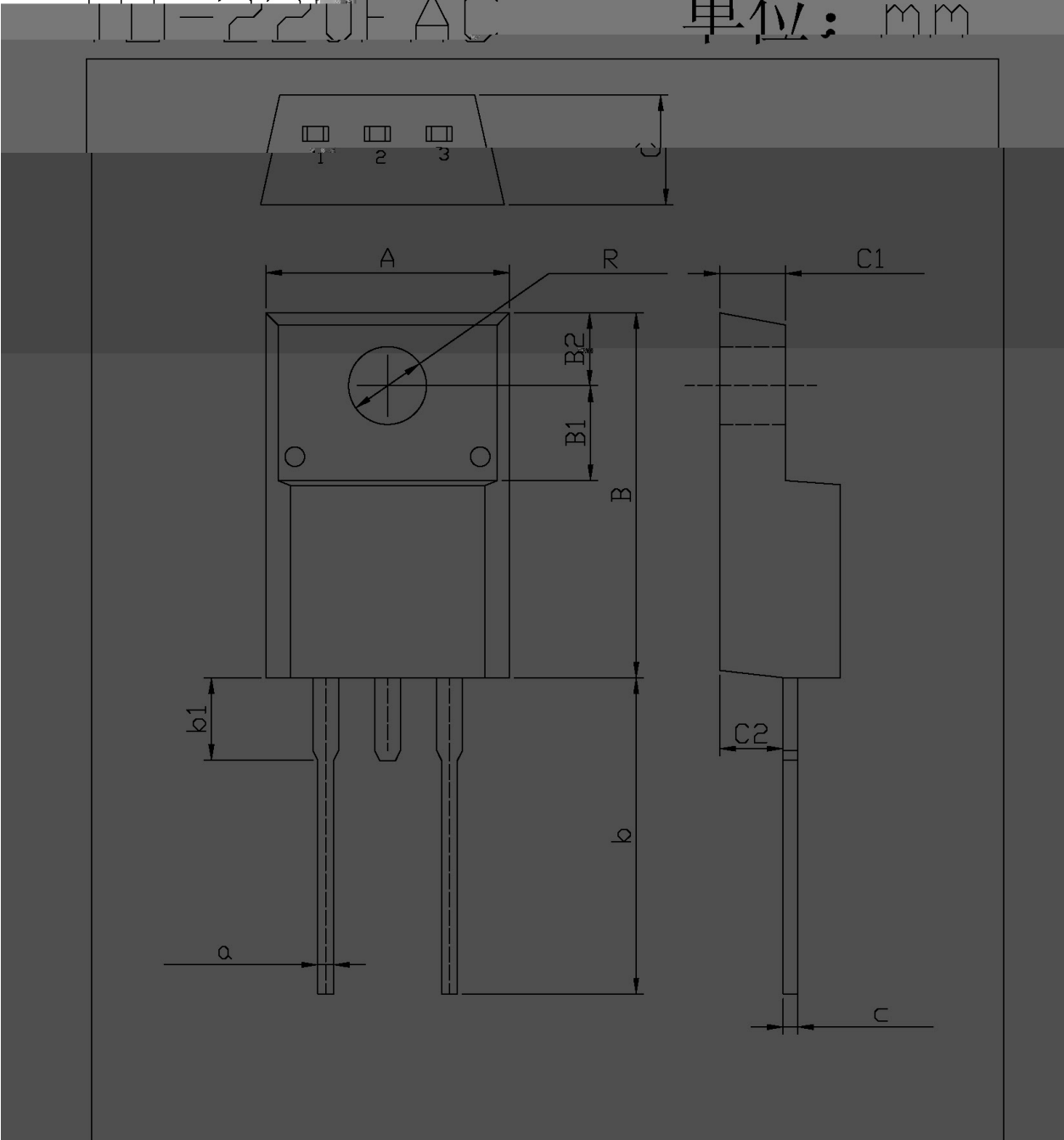
- Short duration pulse test used to minimize self-heating effect.
- Unless otherwise noted, values for the parameters of a single chip

/ Electrical Characteristic Curve



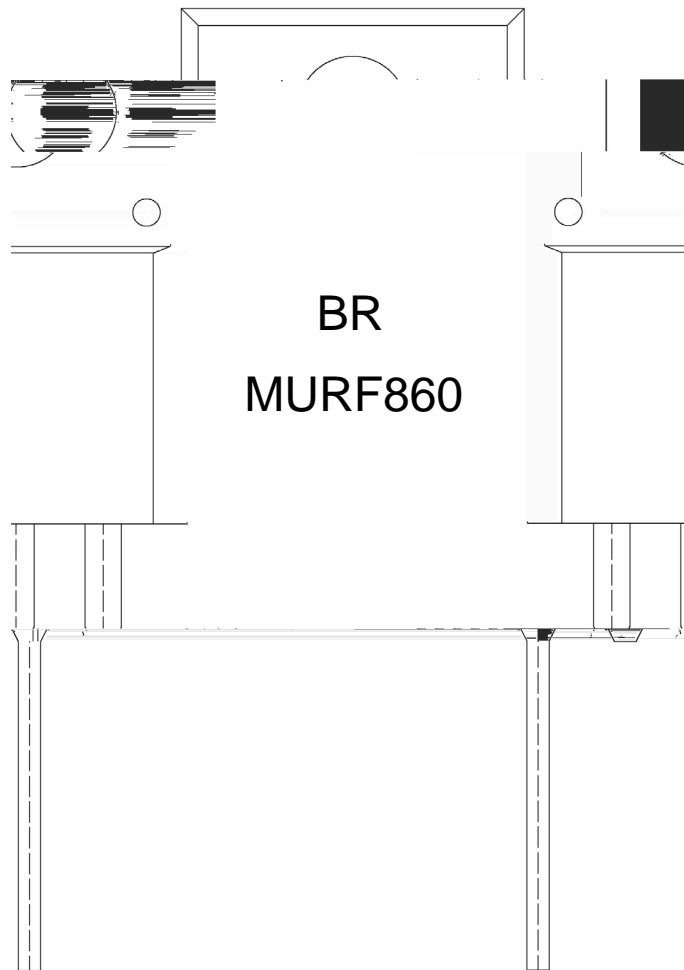
/ Package Dimensions

TO-220FAC 单位: mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
C	4.3	4.7	b1	2.8	2.8

/ Marking Instructions



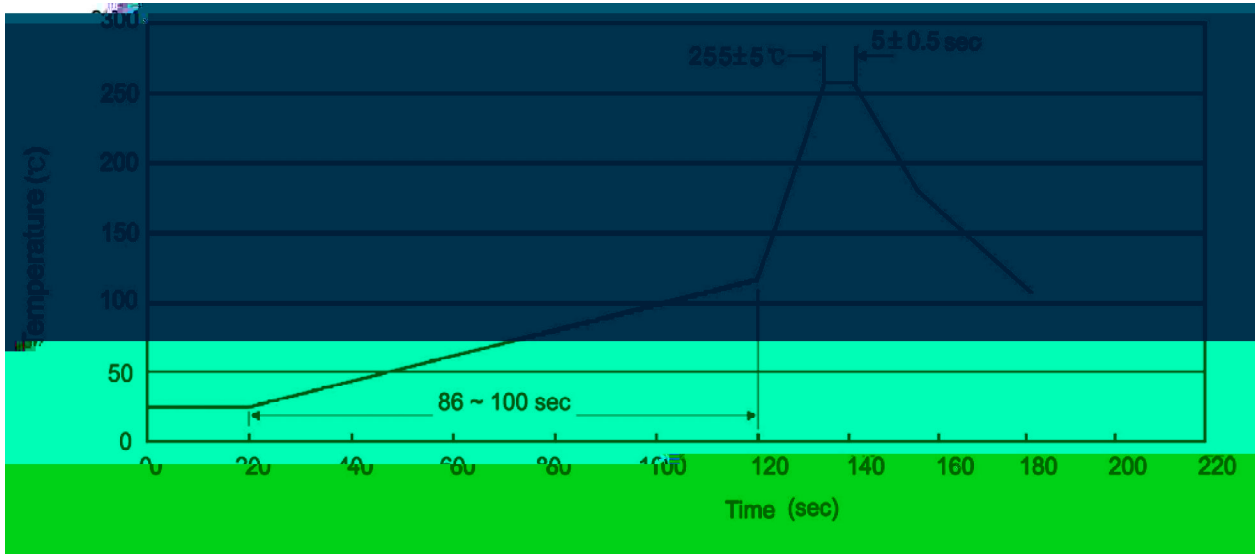
BR

Note:

BR: Company Code
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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只袋	袋盒	只盒	盒箱	只箱	袋	盒	箱

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	只套管	套管盒	只盒	盒箱	只箱	套管	盒	箱

/ Notices