

/ Descriptions

TO-220

Ultrafast Recovery Diode in a TO-220 Plastic Package.

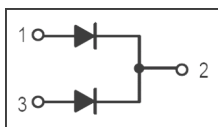
/ Features

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

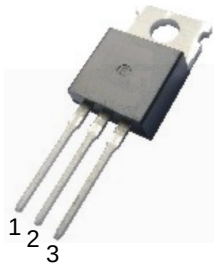
/ Applications

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

/ Equivalent Circuit



/ Pinning



PIN1 Anode PIN 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
RMS Voltage	V_{RMS}	420	V
DC Blocking Voltage	V_{DC}	600	V
Average Forward Current	I_F	2×8	A
Non Repetitive Peak Surge Current	I_{FSM}	125	A
Thermal Resistance Junction to Case	R_{JC}	2.5	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j T_{stg}	-55 175	$^\circ\text{C}$

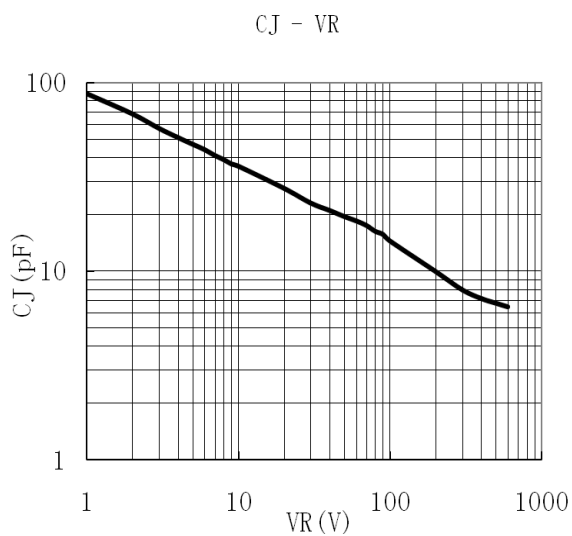
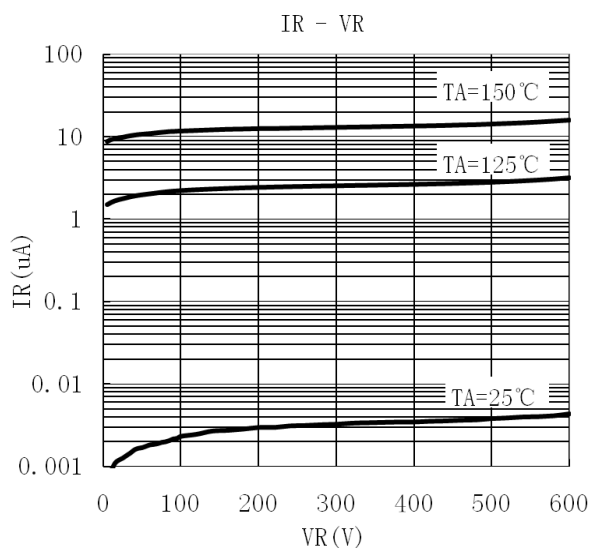
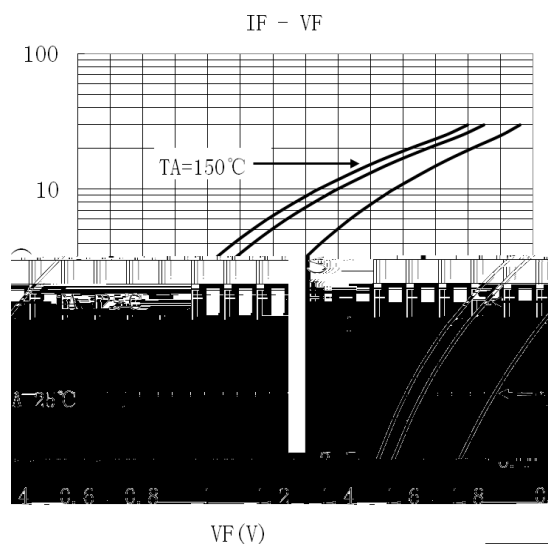
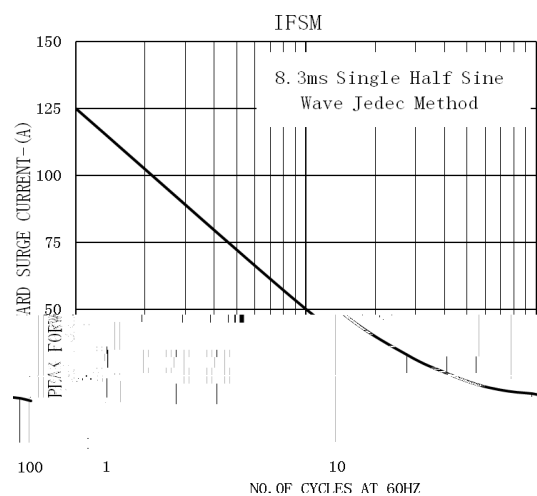
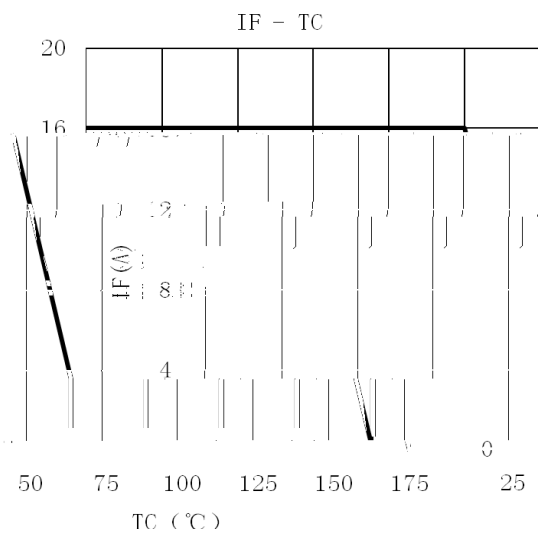
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=8\text{A}(T_C=25^\circ\text{C})$			1.8	V
		$I_F=8\text{A}(T_C=150^\circ\text{C})$		1.05	1.3	V
		$I_F=16\text{A}(T_C=125^\circ\text{C})$			2.0	V
		$I_F=16\text{A}(T_C=150^\circ\text{C})$		1.28	1.6	V
Instantaneous Reverse Current	I_R	$V_R=600\text{V}(T_a=25^\circ\text{C})$			5	A
		$V_R=600\text{V}(T_a=150^\circ\text{C})$		16	100	A
Reverse Recovery Time	t_{rr}	$I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{RR}=0.25\text{A}$			50	ns

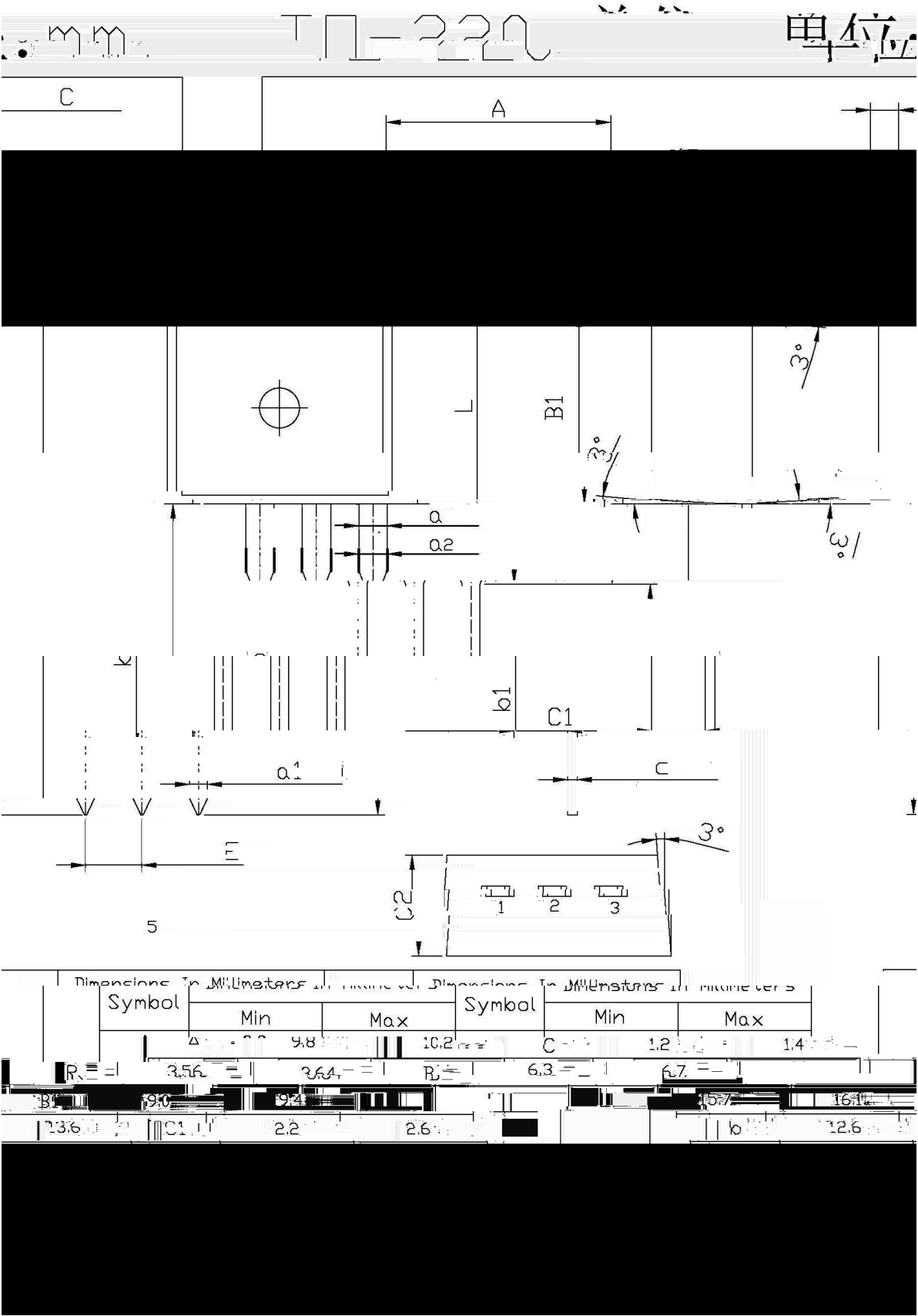
/Notes

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

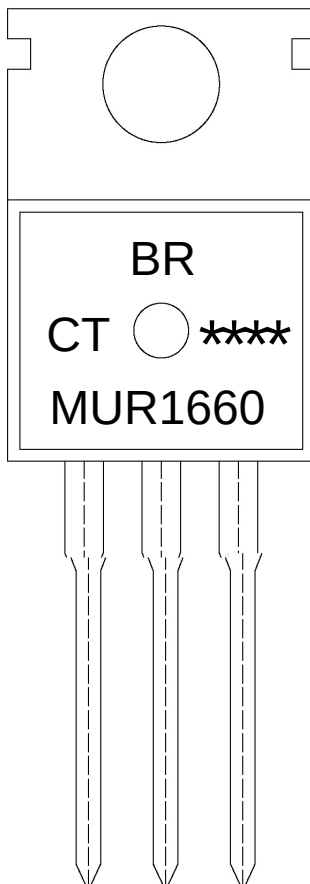
Ⅳ / Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

MUR1660

CT:

Note:

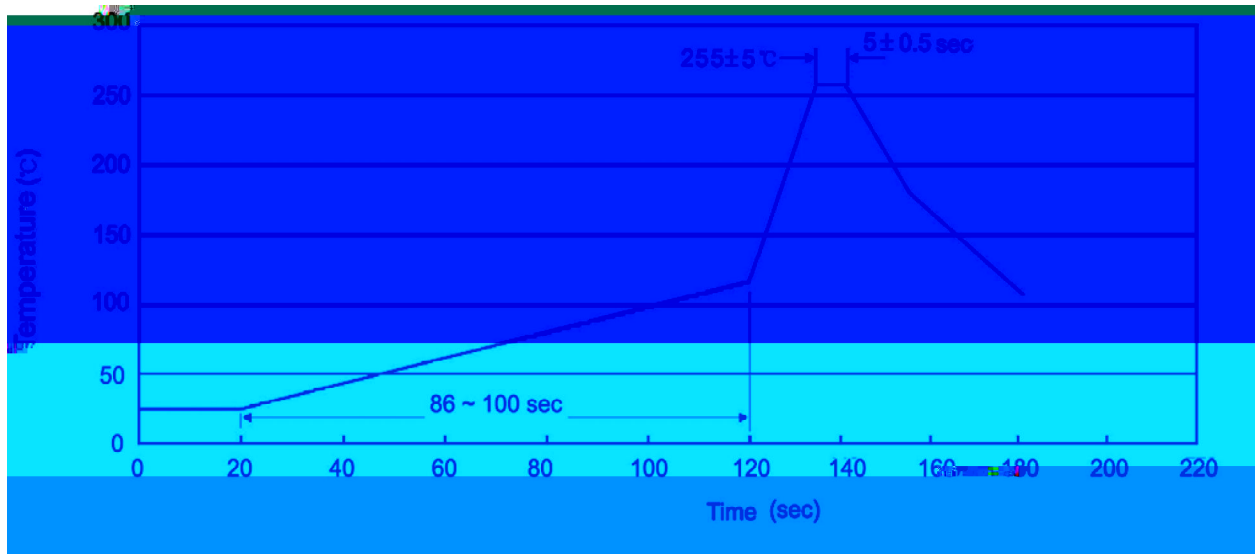
BR: Company Code

MUR1660: Product Type.

CT: Internal Structure

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

Ⅳ () / 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. |

Ⅴ / 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	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	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices