

/ Descriptions

TO-220S

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

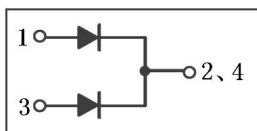
/ Features

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

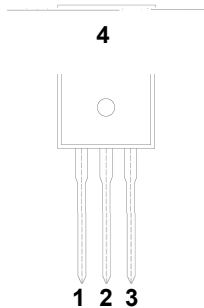
/ Applications

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

/ Equivalent Circuit



/ Pinning



PIN1 Anode

PIN 2 Cathode

PIN 3 Anode

PIN 4 NC

/ 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	$R_{\theta Jc}$	3.0	$^\circ\text{C}/\text{W}$
Storage Temperature Range	T_j T_{stg}	-55 150	$^\circ\text{C}$

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

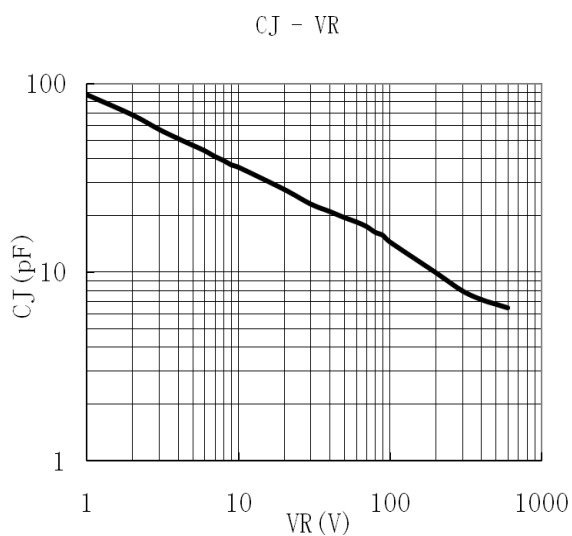
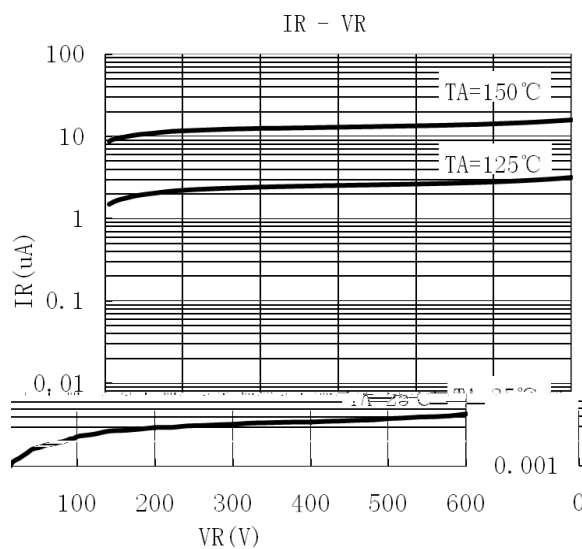
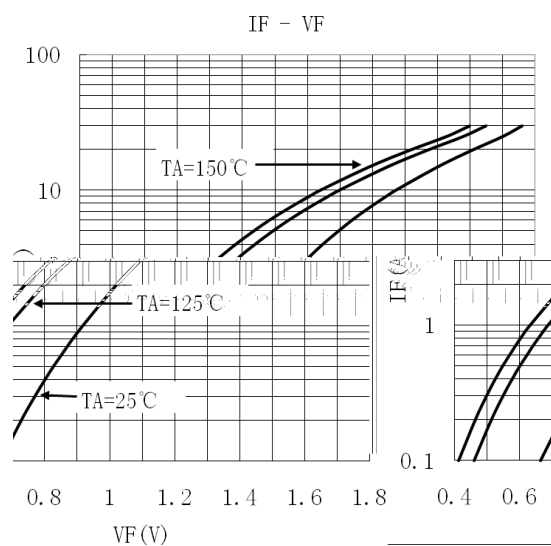
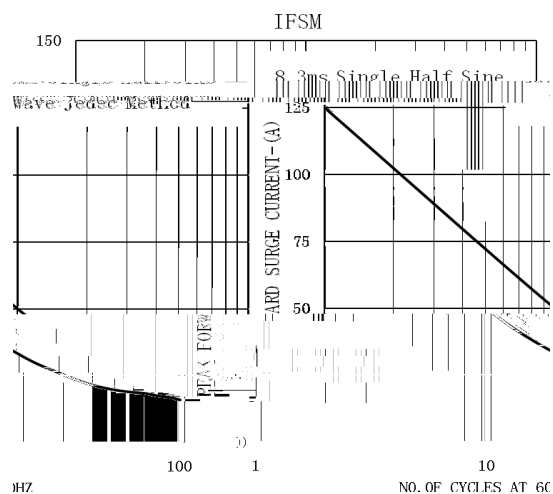
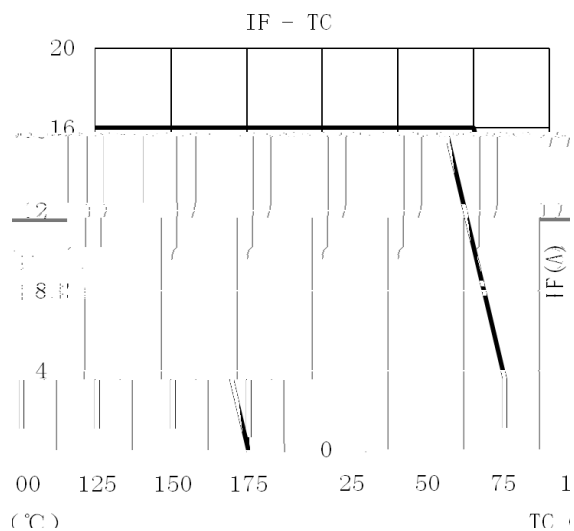
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F=8\text{A}(T_C=25^\circ\text{C})$			1.8	V
		$I_F=8\text{A}(T_C=150^\circ\text{C})$		1.05	1.3	V
		$I_F=16\text{A}(T_C=125^\circ\text{C})$			2.0	V
		$I_F=16\text{A}(T_C=150^\circ\text{C})$		1.28	1.6	V
Instantaneous Reverse Current	I_R	$V_R=600\text{V}(T_a=25^\circ\text{C})$			5	μA
		$V_R=600\text{V}(T_a=150^\circ\text{C})$		16	100	μA
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



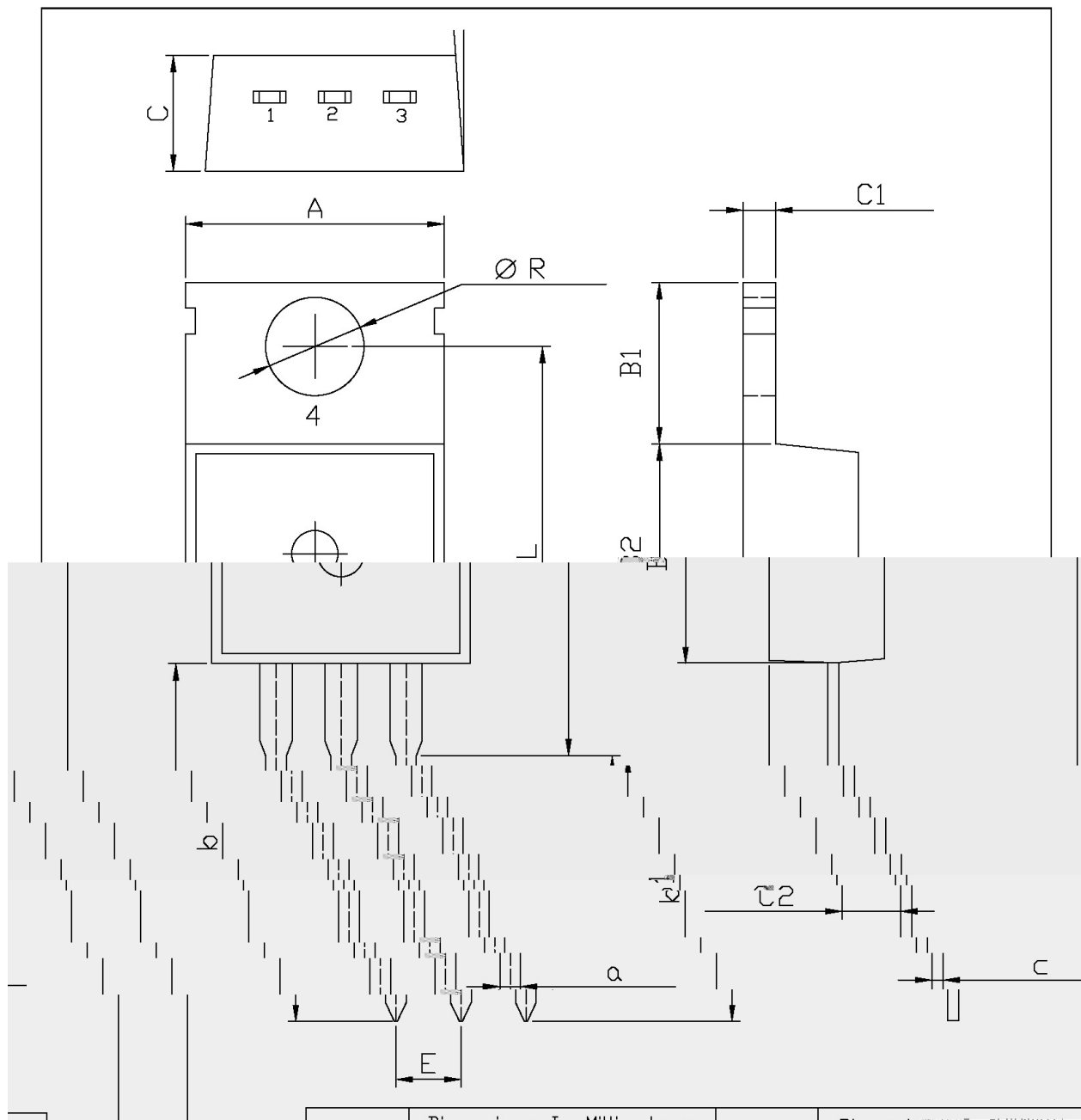
/ Electrical Characteristic Curve



/ **Package Dimensions**

TO-220S

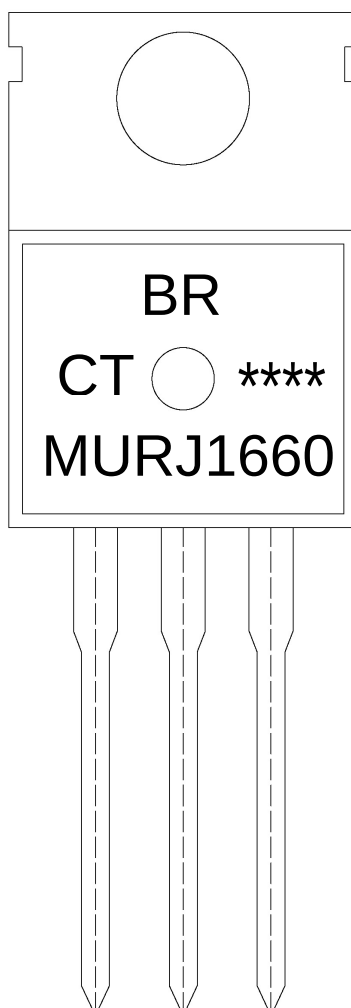
Unit: mm



Dimensions in Millimeters			Dimensions in Millimeters		
Symbol	Min.	Max.	Symbol	Min.	Max.

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/ Marking Instructions



BR

MURJ1660

CT:

Note:

BR: Company Code

MURJ1660 Product Type.

CT: Internal Structure

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

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



Note:

- 1

25 150

60 90sec;
- 2

255±5

5±0.5sec;
- 3

2 10

/sec.
- 1.Preheating:25~150

, Time:60~90sec.
- 2.Peak Temp.:255±5

, Duration:5±0.5sec.
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.

/ 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-220S	50	20	1000	5	5000	532×31.4×5.5	555×164×50	575×290×180

/ Notices