

MURF1060CT

Rev.E Mar.-2016

/ Descriptions

TO-220F

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

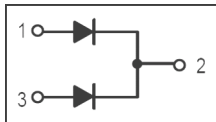
/ Features

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

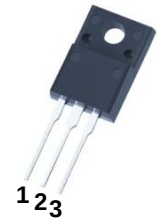
/ Applications

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

/ Equivalent Circuit



/ Pinning



PIN1 Anode PIN2 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 Reverse Voltage	V_{RMS}	420	V
DC Blocking Voltage	V_{DC}	600	V
Forward Current	I_F	2 5	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	

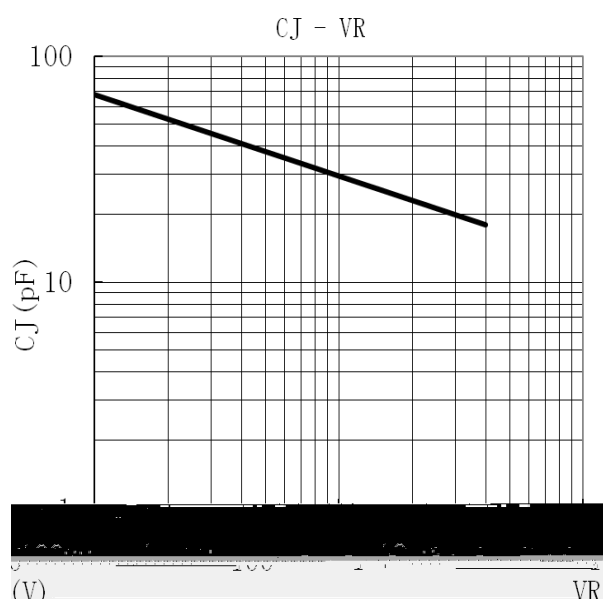
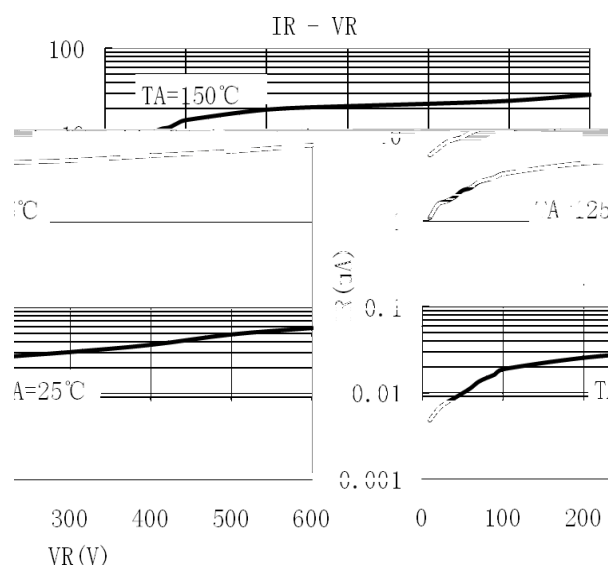
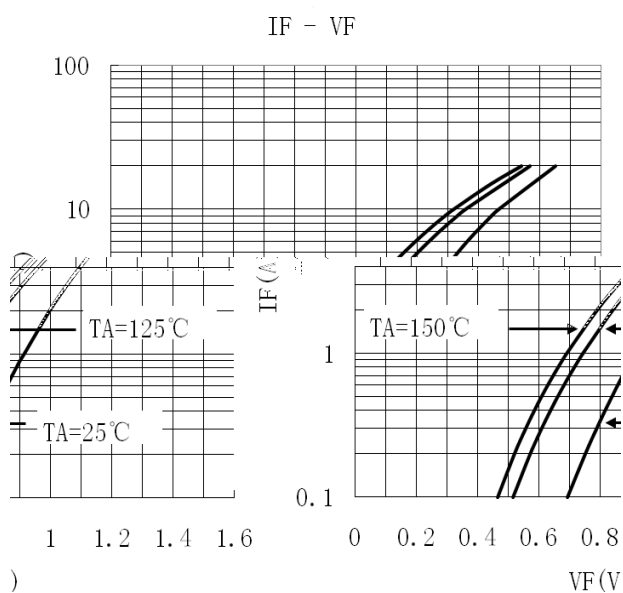
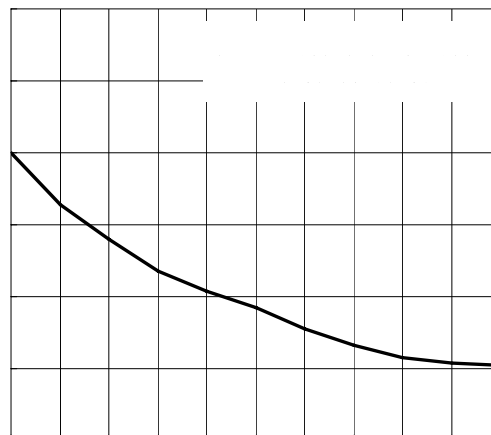
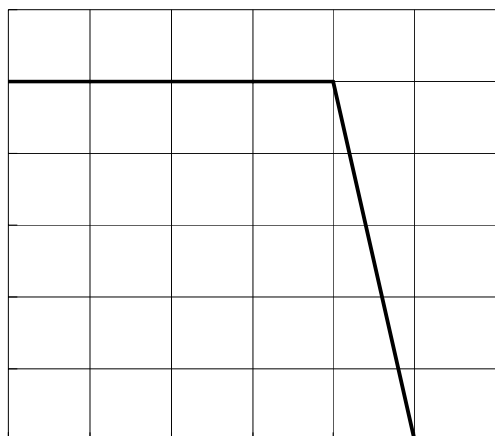
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Voltage	V_R	$I_R=1\text{mA}$	600			V
Forward Voltage	V_F	$I_F=1\text{A}$ $T_C=25$		0.91	1.05	V
		$I_F=1\text{A}$ $T_C=125$		0.74	0.95	
		$I_F=5\text{A}$ $T_C=25$		1.15	1.5	
		$I_F=5\text{A}$ $T_C=125$		1.0	1.2	
Instantaneous Reverse Current	I_R Note 1	$V_R=600\text{V}$ $T_a=25$			10	μA
		$V_R=600\text{V}$ $T_a=125$			500	
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

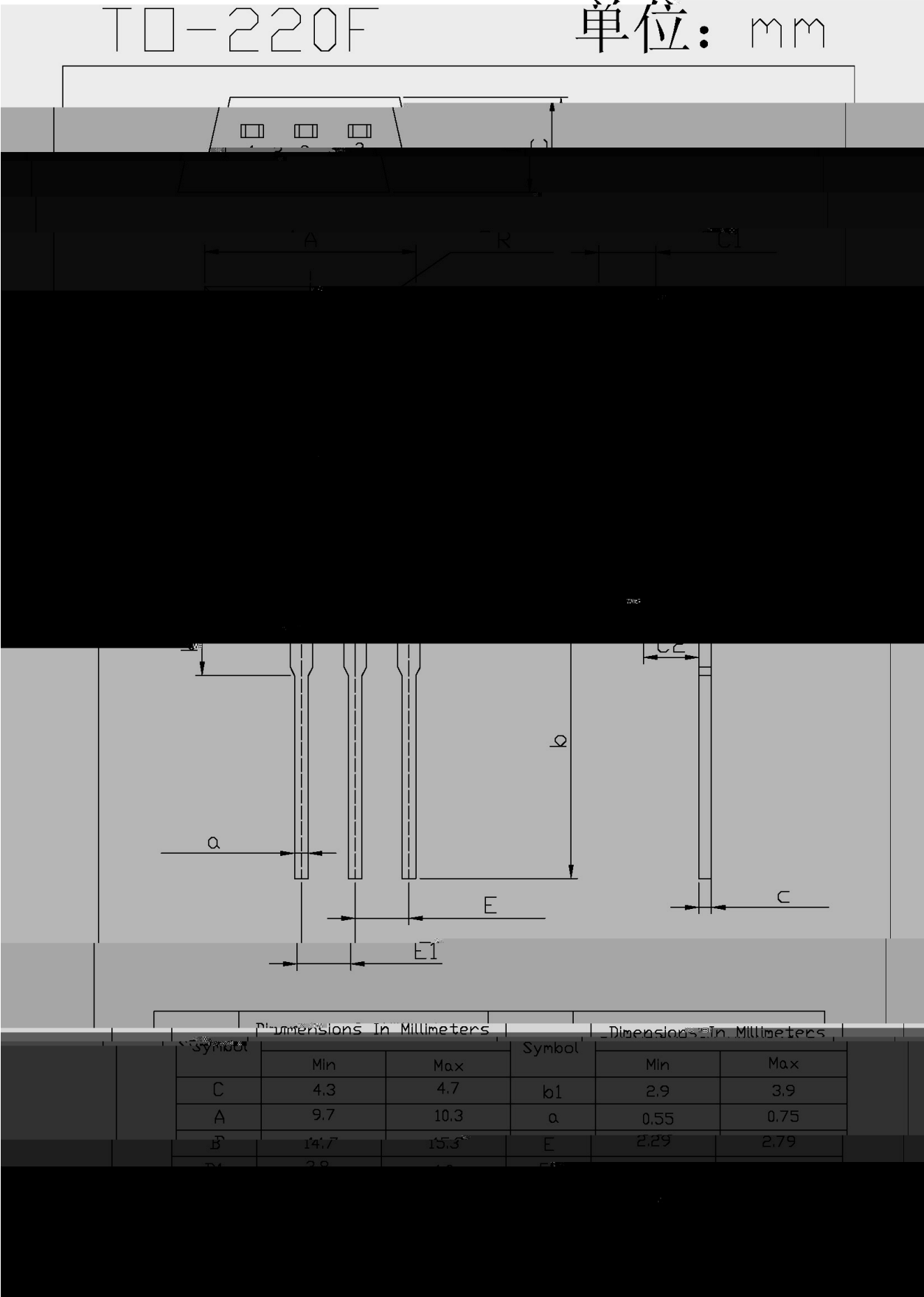
/Notes

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

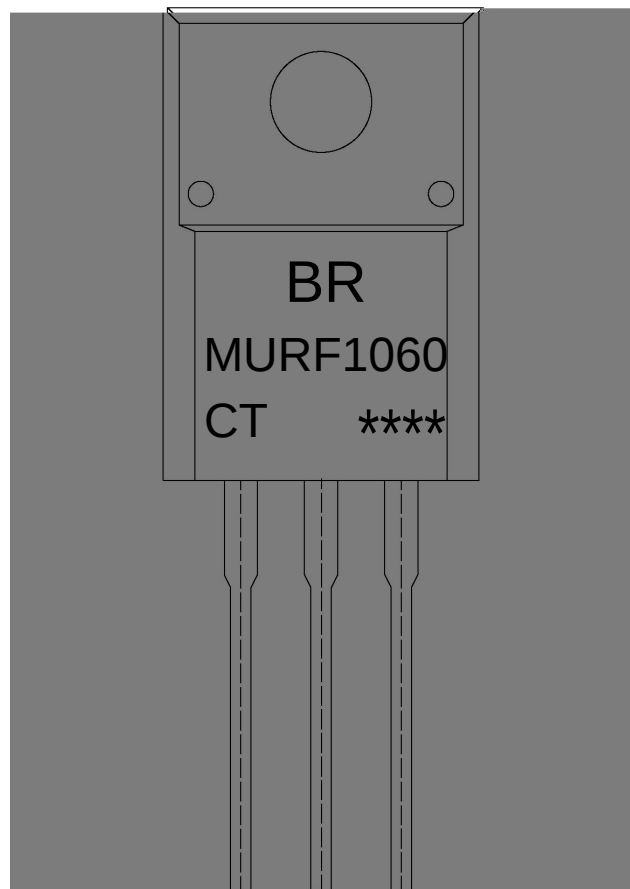
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



BR

MURF1060

CT:

Note:

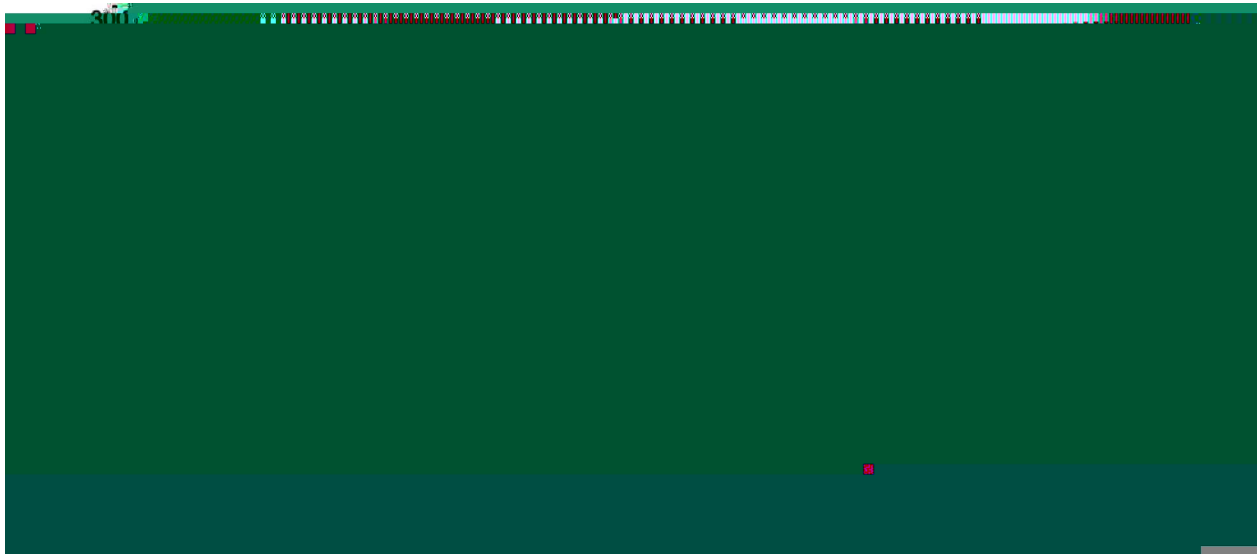
BR: Company Code

MURF1060 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; | 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
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/ Packaging SPEC.

/ BULK

Package Type	Units				Dimension	(unit mm ³)
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	In		