

/ Descriptions

WO0553

Ultrafast Recovery Diode in a TO-220 Plastic Package.

/ Features

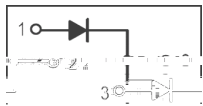
τ_r H_f

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

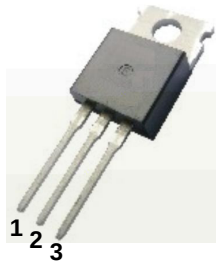
/ Applications

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	N Symbol	Rating	H Unit
Peak Repetitive Reverse Voltage	V_{RRM}	400	V
RMS Voltage	V_{RMS}	280	V
DC Blocking Voltage	V_{DC}	400	V
Average Forward Current	I_F	2×8	A
Non Repetitive Peak Surge Current	I_{FSM}	120	A
Thermal Resistance Junction to Case	$R_{\theta JC}$	2.8	/W
Operating and Storage Temperature Range	T_j T_{stg}	-55 150	

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

Parameter	N Symbol	Test Conditions	Min	ϵ Typ	Max	H Unit
Forward Voltage	V_F	$I_F=2A$ $T_c=25$		0.93	1.1	V
		$I_F=2A$ $T_c=150$		0.69	0.8	V
		$I_F=8A$ $T_c=25$		1.1	1.3	V
		$I_F=8A$ $T_c=150$		0.92	1.1	V
Instantaneous Reverse Current	I_R Note 1	$V_R=400V$ $T_a=25$			1.0	μA
		$V_R=400V$ $T_a=150$			100	μA
Reverse Recovery Time	t_{rr}	$I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$			50	ns

/Notes

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effect.

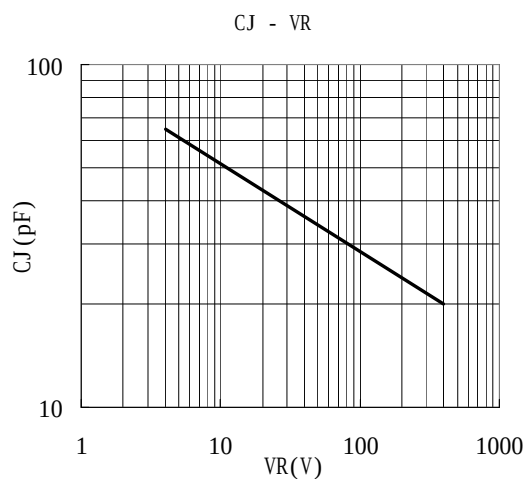
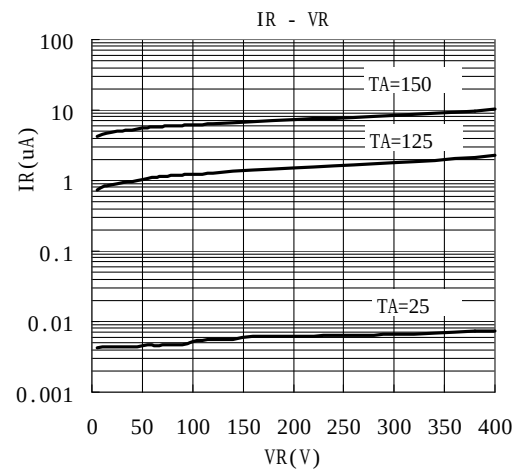
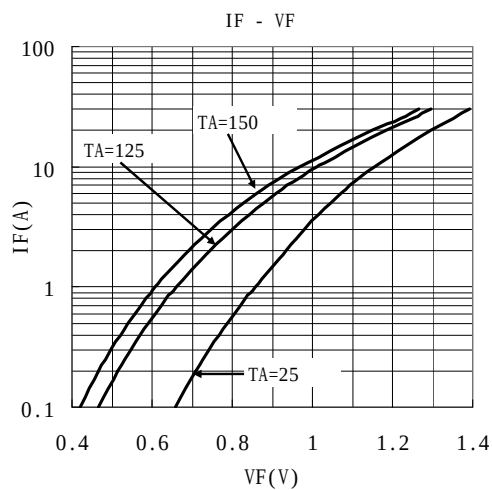
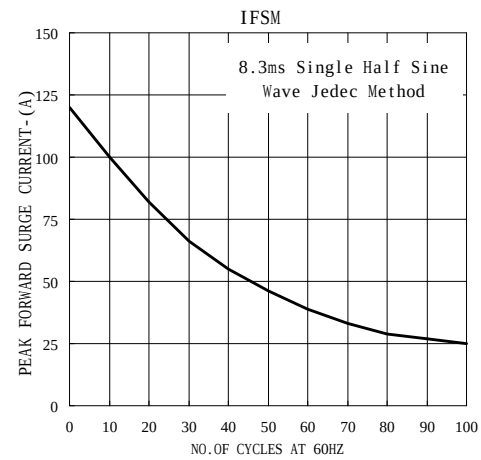
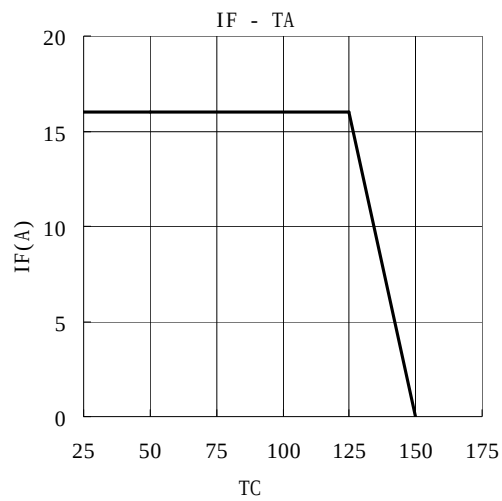
2.

single chip

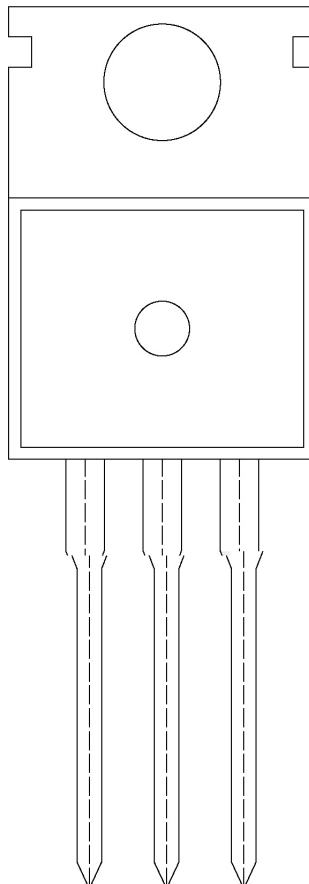
/Short duration pulse test used to minimize self-heating

/ Unless otherwise noted, values for the parameters of a

/ Electrical Characteristic Curve



/ Marking Instructions



BR

N

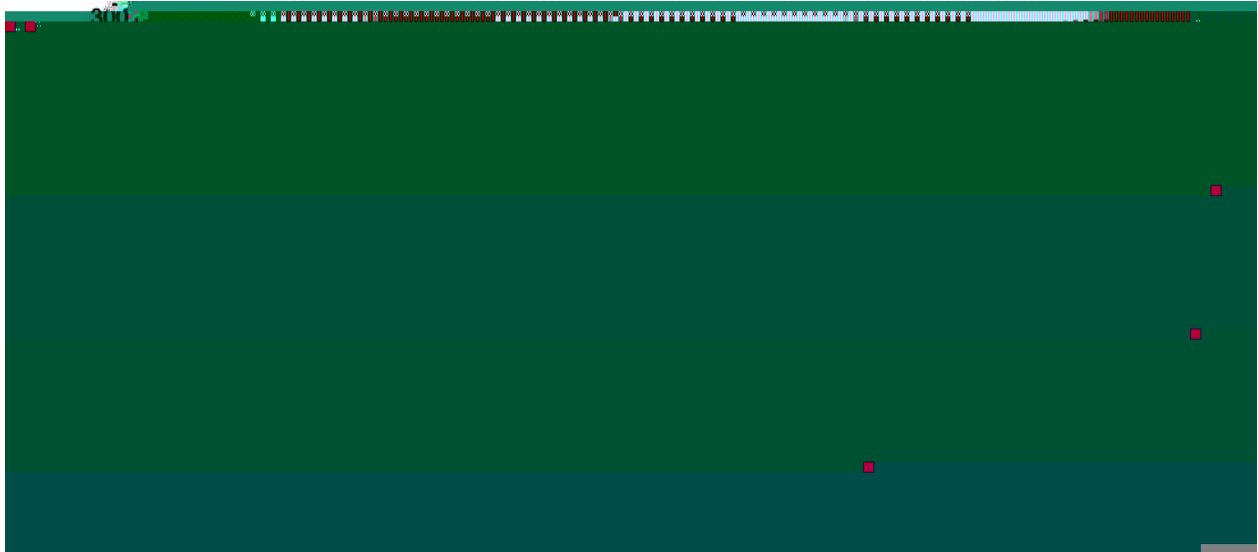
MXR4643

N

CW:

Eq 3;5p

() / 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)		

/ TUBE

Package Type	Units					Dimension (unit mm ³)		

/ Notices