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A Product Line of Diodes Incorporated | LITE-ON SEMICONDUCTOR

MURS4100C

HYPER FAST GLASS PASSIVATED RECTIFIERS

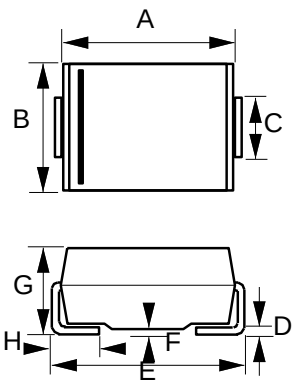
REVERSE VOLTAGE – 1000 Volts
FORWARD CURRENT – 4 Amperes

FEATURES
- Ultrafast, soft recovery
- Very low conduction and switching losses
- High reverse voltage capability
- Qualification is according to AEC-Q101 Rev_D
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

APPLICATION
- Switching power supplies
- Inverters
- Free wheeling diodes

MECHANICAL DATA
- Package: JEDEC DO-214AB
- Package Material: "Green" molding compound, UL flammability classification 94V-0,"Halogen-free".
- Moisture Sensitivity Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Weight: 0.249 grams (Approximate)
- Marking code: U4MC

SMC



SMC		
DIM	MIN	MAX
A	6.60	7.11
B	5.59	6.22
C	2.92	3.18
D	0.15	0.31
E	7.75	8.13
F	0.05	0.20
G	2.01	2.50
H	0.76	1.52
All dimension in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER		SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	1000	V
Maximum DC blocking voltage		V_{DC}	1000	V
Maximum Average rectified output current	@T_C=130°C	$I_{(AV)}$	4	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.		I_{FSM}	70	A
Operating junction and Storage Temperature range		T_J, T_{STG}	-55 ~ +175	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note4)	I_F=4A	T_J=25°C T_J=150°C	V_F	-- 1.06	1.85 1.53	V
Reverse Leakage current	V_R=1000V	T_J=25°C T_J=150°C	I_R	-- 71.3	25 900	uA

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	TYP	MAX	UNIT
Reverse recovery time	I_F=0.5A, I_{rr}=0.25A, I_R=1.0A	T_{rr}	--	75	nS
Reverse recovery current	I_F=4A, dI/dt=200A/nS , VR=400V, T_J=125°C	I_{RM}	10	--	A
Reverse recovery charge		Q_{rr}	744	--	nC

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 5,6)	$RthJ_C$ $RthJ_L$ $RthJ_a$	7 9 20	°C/W

REV.-3 , Nov-2021, KSGC10

Note:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. 300us pulse width, 2% duty cycle.
5. Thermal resistance test performed in accordance with JESD-51.
6. The unit mounted on cooper plate heat sink (30mm x 30mm x 1mm & 35mm x 35mm x 1.5mm).

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RATING AND CHARACTERISTIC CURVES
MURS4100C

FIG.1 FORWARD CURRENT DERATING CURVE

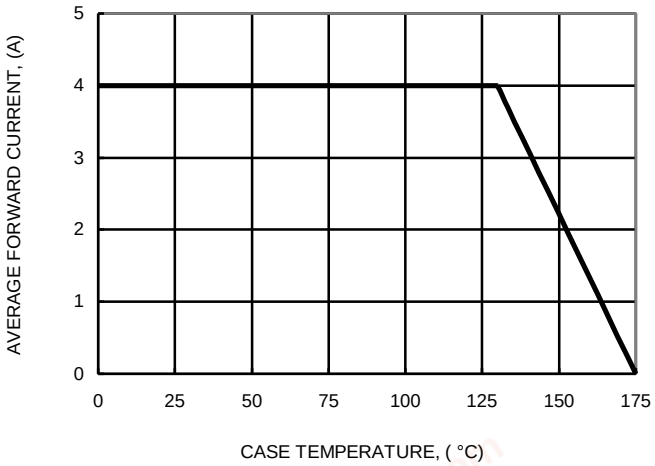


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

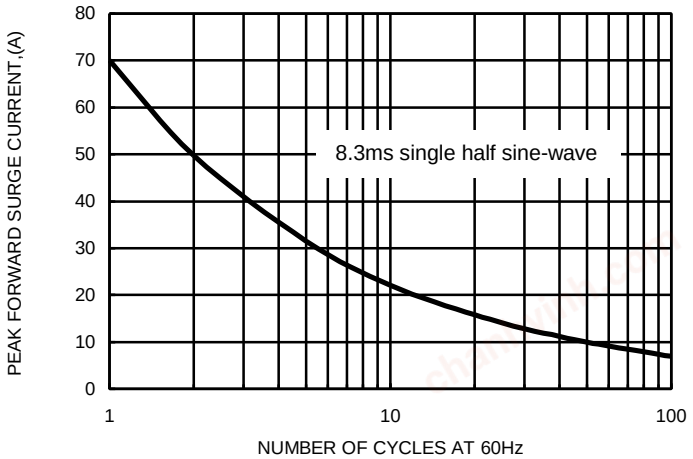


FIG.3 TYPICAL FORWARD CHARACTERISTICS

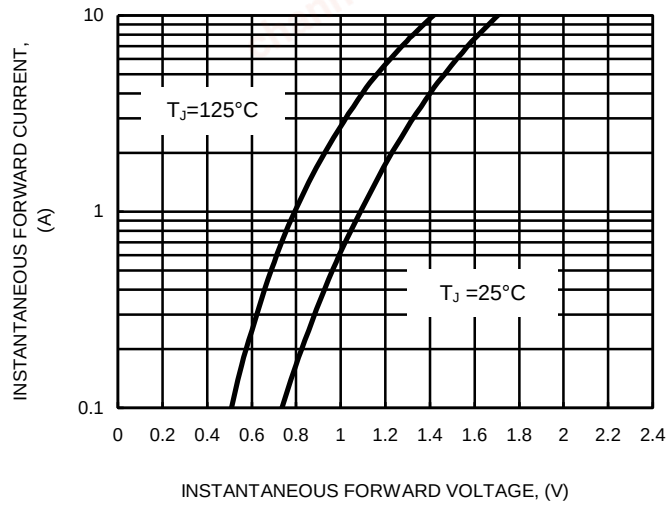


FIG.4 TYPICAL JUNCTION CAPACITANCE

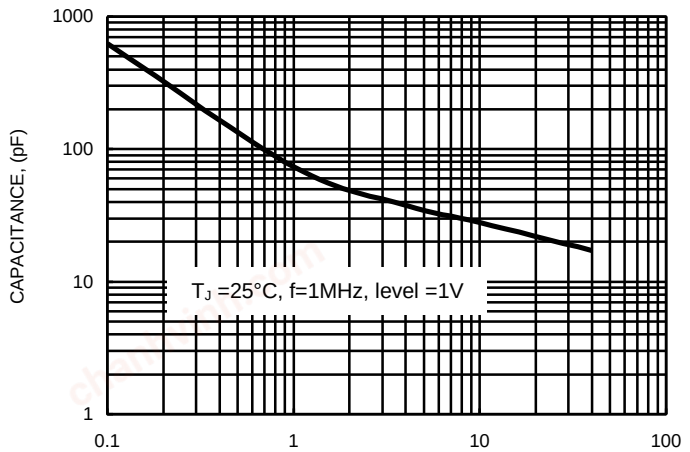
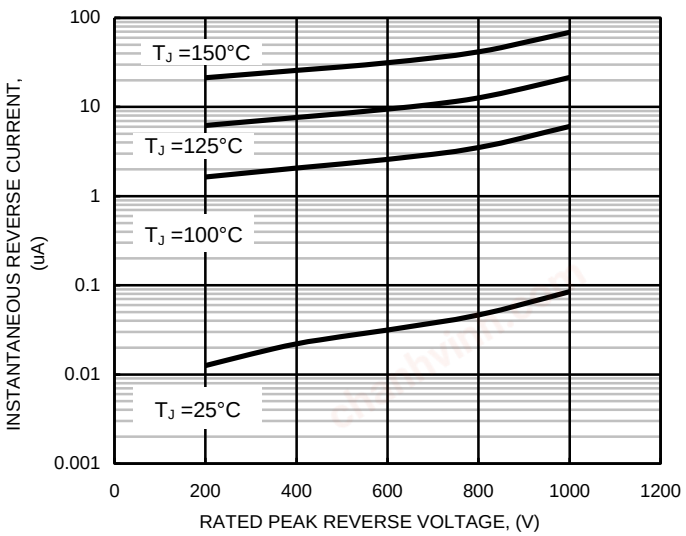


FIG.5 TYPICAL REVERSE CHARACTERISTICS



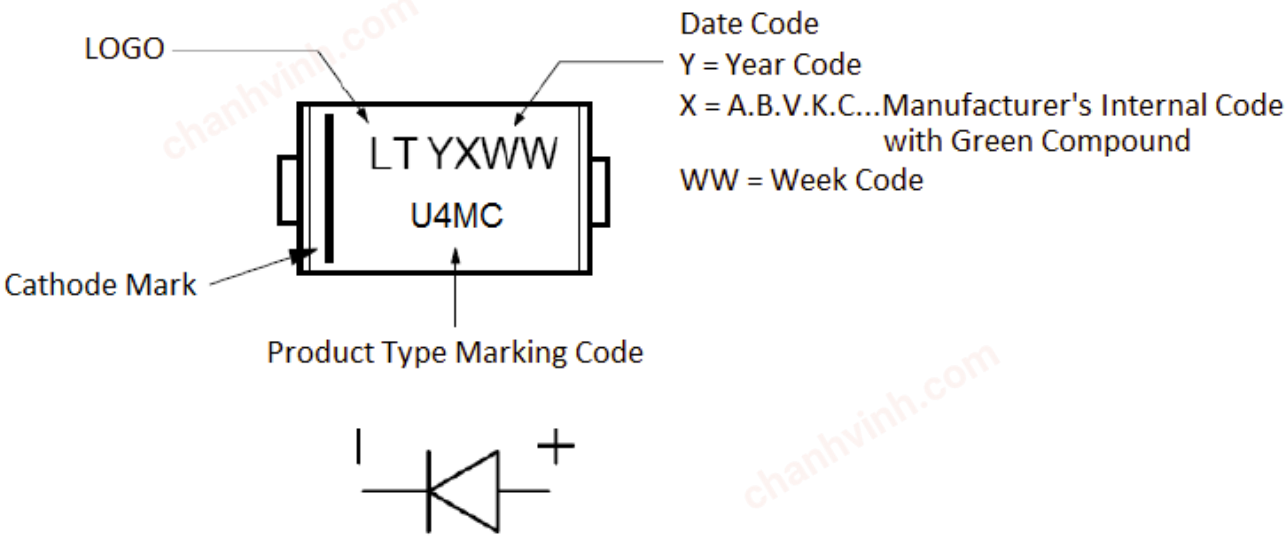
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Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
MURS4100C	SMC	3000	Tape & Reel

Marking Information :



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