

**Ultra-Fast Recovery EPI Rectifier Diodes**

**Reverse Voltage - 1200 V**

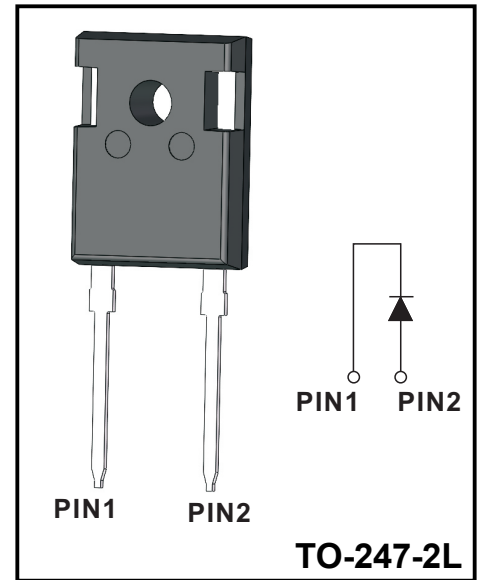
**Forward Current - 30A**

**FEATURES**

- ◆ High surge forward current capability
- ◆ High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- ◆ Guard ring for enhanced ruggedness and long term reliability
- ◆ Solder dip 275 °C max. 7s, per JESD 22-B106

**MECHANICAL DATA**

- ◆ Case: TO-247-2L
- ◆ approx. Weight: 6.0g ( 0.21oz)
- ◆ Lead free finish, RoHS compliant
- ◆ Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".



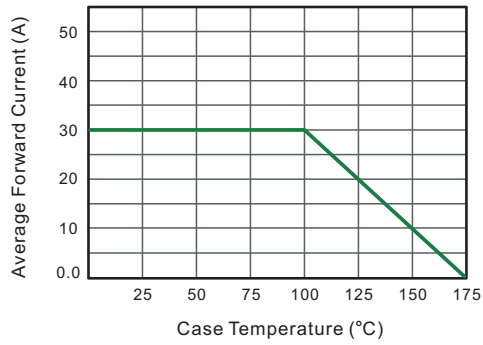
**Maximum Ratings And Electrical Characteristics**

Ratings At 25°C Ambient Temperature Unless Otherwise Specified

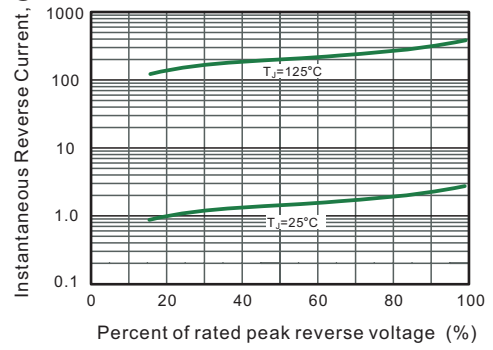
Parameter	Symble	MUR30120W	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1200	V
Average Rectified Output Current @60Hz half sinewave, R-load, Tc(FIG.1)	$I_O$	30	A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	300	A
Max Instantaneous Forward Voltage at 30 A	$V_F$	3.5	V
Maximum DC Reverse Current $T_a = 25^{\circ}C$ at Rated DC Reverse Voltage $T_a=125^{\circ}C$	$I_R$	10 500	$\mu A$
Typical Thermal Resistance	$R_{\theta JC}$	0.4	$^{\circ}C/W$
Maximum Reverse Recovery Time (1)	$t_{rr}$	60	ns
Operating Junction Temperature Range	$T_j$	-55 ~ +175	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-55 ~ +175	$^{\circ}C$

(1) $I_F=0.5A, I_R=1A, I_{RR}=0.25A$

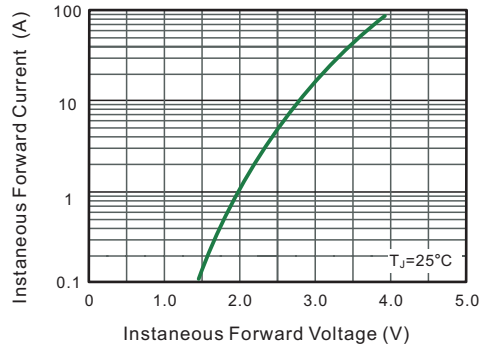
**Fig.1 Forward Current Derating Curve**



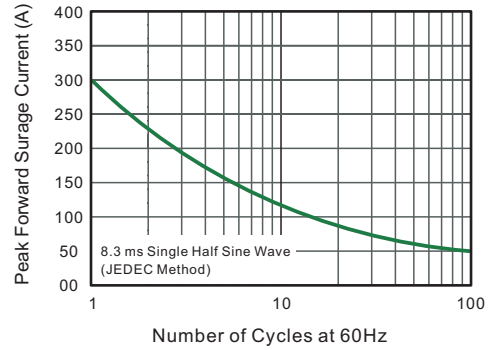
**Fig.2 Typical Instantaneous Reverse Characteristics**



**Fig.3 Typical Forward Characteristic**



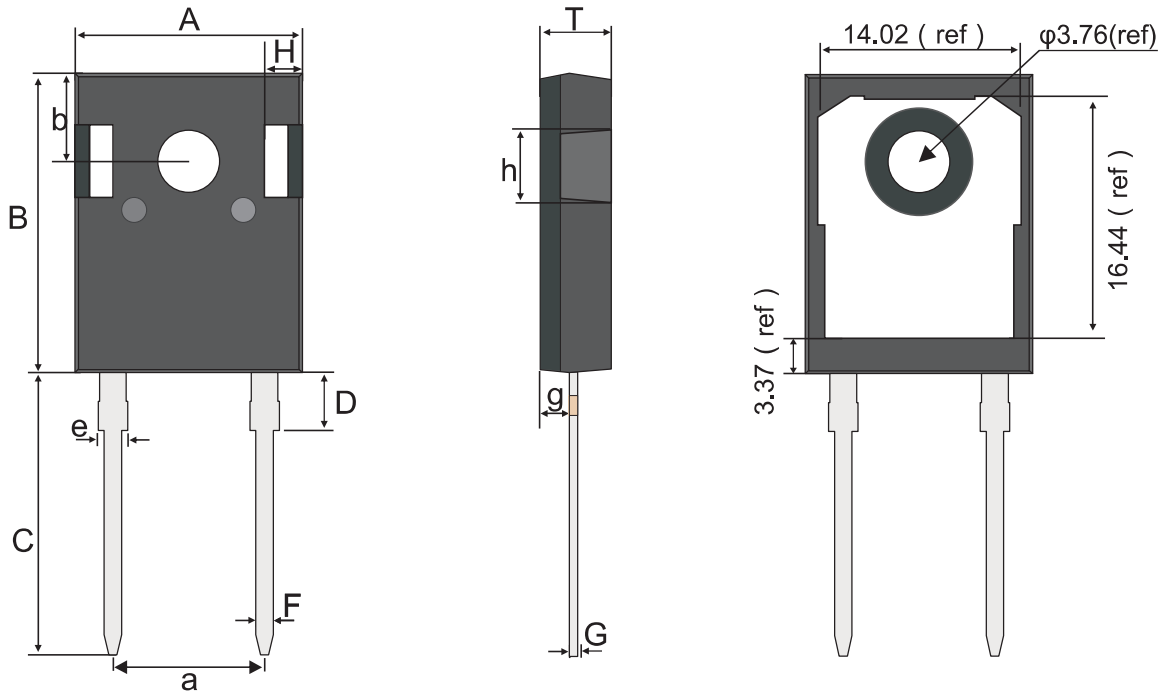
**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



**Package Outline**

**TO-247-2L**

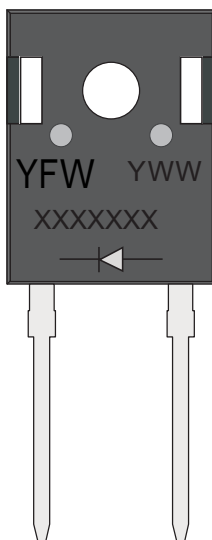
Through hole Package ; 2 leads



TO-247-2L mechanical data

UNIT		A	B	b	C	D	e	F	g	G	T	a	H	h
mm	max	16.01	21.18	6.26	20.2	4.25	2.2	1.3	2.49	0.7	5.2	10.98	2.71	5.37
	typ	15.81	20.98	6.16	20.0	4.15	2.05	1.2	2.39	0.6	5.0	10.88	2.51	5.17
	min	15.61	20.78	6.06	19.8	4.05	1.9	1.1	2.29	0.5	4.8	10.78	2.31	4.97
mil	max	630	834	246	795	167	87	51	98	28	205	432	107	211
	typ	622	826	243	787	163	81	47	94	24	197	428	99	204
	min	615	818	239	780	159	75	43	90	20	189	424	91	196

**MARKING DIAGRAM**



YWW: Date Code  
Y: Years(0~9)  
WW: Week  
XXXXXXX: Product name  
(NOTE: The weekly code is based on the actual number of weeks in the calendar year.)

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