

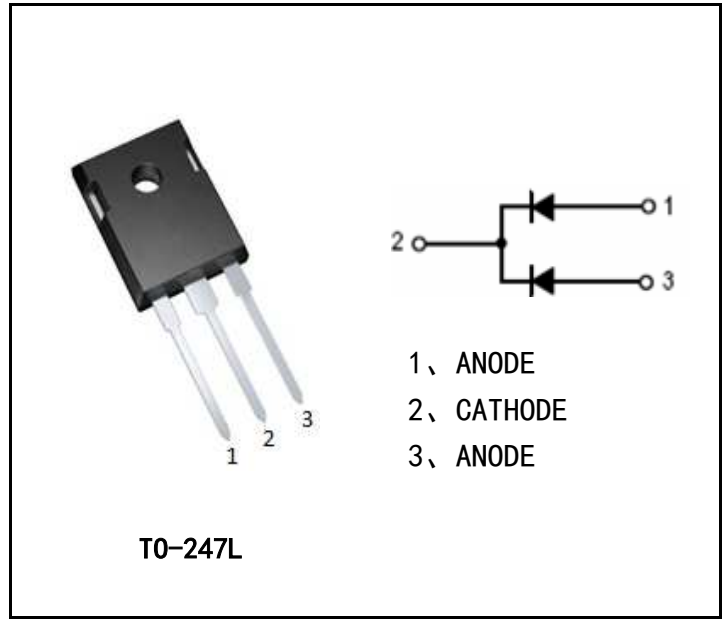


PRODUCT FEATURES

- Ultrafast Recovery Time
- Soft Recovery Characteristics
- Low Recovery Loss
- Low Forward Voltage
- High Surge Current Capability
- Low Leakage Current

APPLICATIONS

- Freewheeling, Snubber, Clamp
- Inversion Welder
- PFC
- Plating Power Supply
- Ultrasonic Cleaner and Welder
- Converter & Chopper
- UPS



ABSOLUTE MAXIMUM RATINGS

TC=25° C unless otherwise specified

Symbol	Parameter	Test Conditions	Value	Unit
V_R	D.C. Reverse Voltage		300	V
V_{RRM}	Repetitive Reverse Voltage		300	V
$I_{F(AV)}$ (per leg)	Average Forward Current	$T_C=110^{\circ}C$, Duty=0.5	30	A
$I_{F(AV)}$ (Total)			60	
I_{FSM}	Non-Repetitive Surge Forward Current	Square wave, 20kHz	330	A
T_J	Junction Temperature		-55 to +175	°C
T_{STG}	Storage Temperature Range		-55 to +175	°C

ELECTRICAL AND THERMAL CHARACTERISTICS

TC=25° C unless otherwise specified

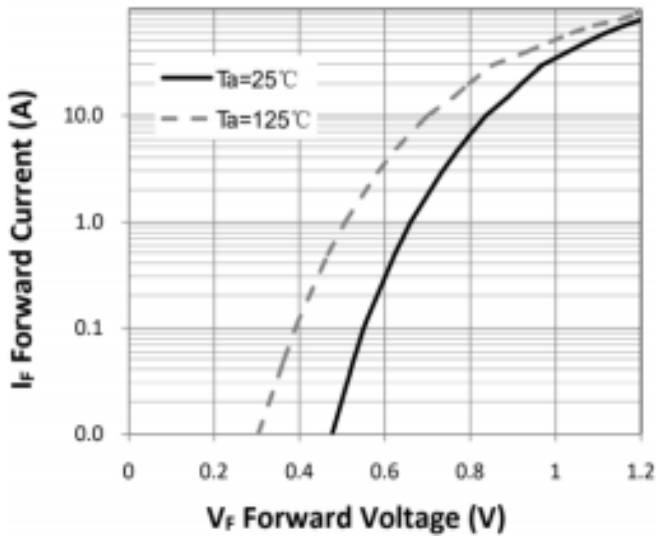
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R=300V$, $T_J=25^{\circ}C$	--	--	20	μA
		$V_R=300V$, $T_J=150^{\circ}C$	--	--	200	μA
V_F	Forward Voltage	$I_F=30A$, $T_J=25^{\circ}C$	--	0.97	1.2	V
		$I_F=30A$, $T_J=125^{\circ}C$	--	0.87	1.15	V
t_{rr}	Reverse Recovery Time ($I_F=1A$, $V_R=30V$, $di_F/dt=-200A/\mu s$)		--	30	40	ns
t_{rr}	Reverse Recovery Time ($I_F=0.5A$, $I_R=1A$, $IRR=0.25A$)		--	25	35	ns

THERMAL CHARACTERISTICS

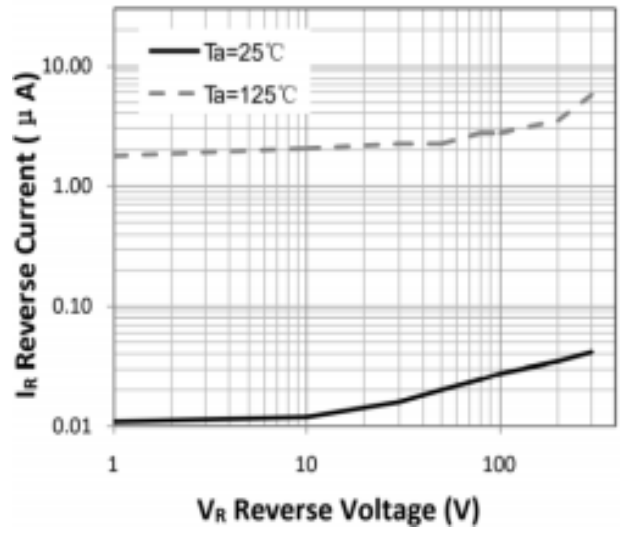
Rating	Symbol	Value		Unit
Maximum Thermal Resistance	θ_{JC}	T0-247L	1.5	°C/W



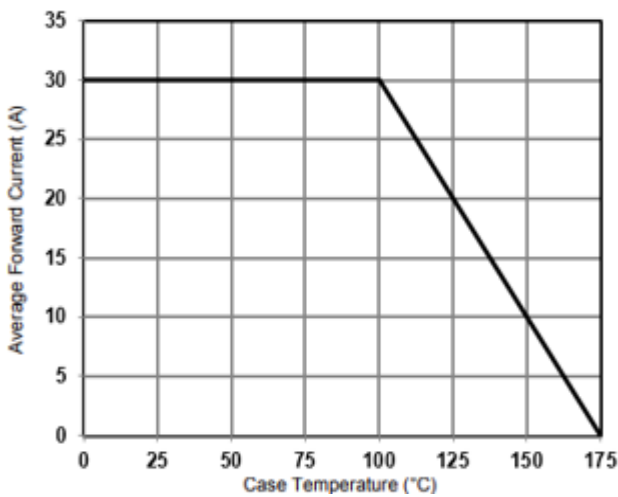
■ Characteristics Curves



Typical Forward Voltage Per Diode



Typical Reverse Current Per Diode



Average Forward Current vs. Case Temperature Per Diode



TO-247L MECHANICAL DATA

UNIT: mm

SYMBOL	MIN	NOM	MAX	SYMBOL	MIN	NOM	MAX
A	4.80		5.20	E1	13.00		13.60
A1	2.20	2.40	2.60	E2	5.00		5.50
A2	1.85		2.15	E3	1.90		2.60
b	1.07		1.33	e		5.44	
b2	1.90		2.16	L	19.30		19.90
b4	2.90		3.20	L1	3.75	3.95	4.15
c	0.52		0.68	ΦP	3.40		3.80
D	20.70		21.30	ΦP1	7.00		7.40
D1	16.15		16.95	S	6.04	6.15	6.30
E	15.50		16.10				

