M60F30CT

60A 300V Fast Recovery Diode

Applications

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

Product Summary

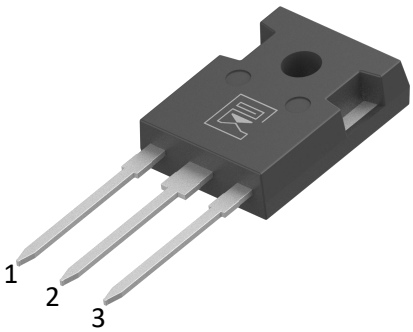
V_{RRM}	300	V
I_F@Tc=110℃	30X2	A
$V_{F\ ,TYP}$@30A,Tc=25℃	0.97	V
$V_{F\ ,TYP}$@30A,Tc=125℃	0.87	V
$I_{R,\ MAX}$@Tc=25℃	20	uA

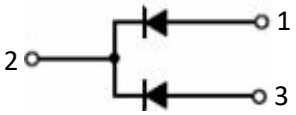
Features

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

RoHS Pb Lead-free HF

TO-247L





Anode： 1
Cathde： 2
Anode： 3

Package Marking and Ordering Information

Ordering code	Marking	Package	Packaging	Min. package quantity
MSL-M60F30CT	M60F30CT	TO-247L	Tube	450

Absolute Maximum Ratings（Tc=25℃ unless otherwise noted)

Parameter	Test Conditions	Symbol	Ratings	Unit
D.C. Reverse Voltage		V_R	300	V
Repetitive Reverse Voltage		V_{RRM}	300	V
Average Forward Current	T_C=110°C，Duty=0.5	$I_{F(AV)(per\ leg)}$	30	A
		$I_{F(AV)(Totel)}$	60	A
Non-Repetitive Peak Surge Current	Square wave, 20kHZ	I_{FSM}	330	A
Junction Temperature		T_j	-55 to +175	℃
Storage Temperature		T_{stg}	-55 to +175	℃

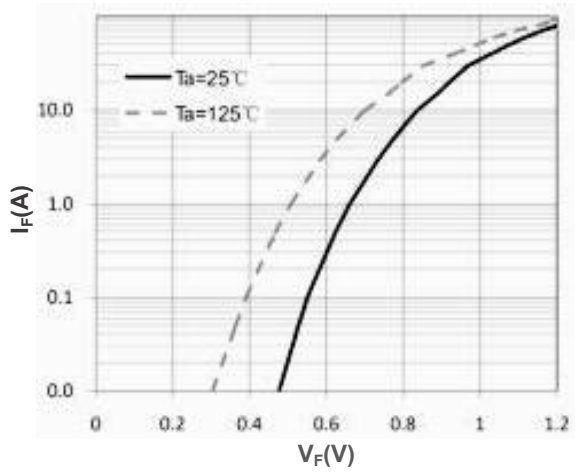
Thermal Characteristics

Parameter	Symbol	Package	Max	Unit
Maximum Thermal Resistance	$R_{\theta JC}$	TO-247L	1.5	℃/W

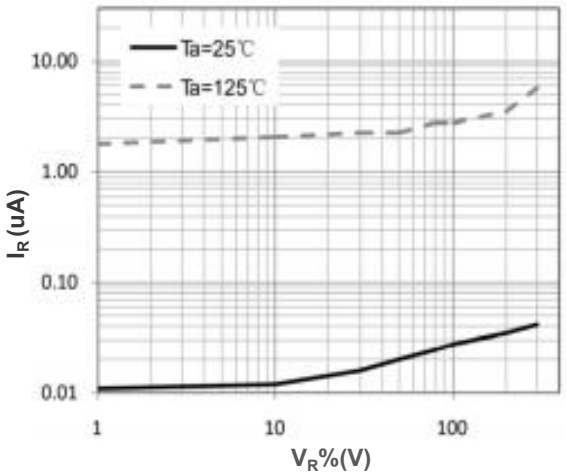
Electrical Characteristics（Tc=25℃ unless otherwise noted）

Parameter	Symbol	Test Condition		Min	Typ	Max	Unit
Forward Voltage	V_F	I_F=30A，T_J=25℃		-	0.97	1.2	V
		I_F=30A，T_J=125℃		-	0.87	1.15	V
Reverse Leakage Current	I_{RM}	V_R=300V，T_J=25°C		-	-	20	uA
		V_R=300V，T_J=150°C		-	-	200	uA
Reverse Recovery Time	t_{rr}	I_F=1A, V_R=30V, diF/dt=-200A/μs		-	30	40	ns
Reverse Recovery Time	t_{rr}	I_F=0.5A V_R=200V diF/dt=-200A/μs	T_J=25°C	-	-	-	ns
Reverse Recovery Time	t_{rr}		T_J=125°C	-	-	-	ns
Reverse Recovery Charge	Q_{rr}		T_J=125°C	-	-	-	nC
Max. Reverse Recovery Current	I_{RRM}		T_J=125°C	-	-	-	A

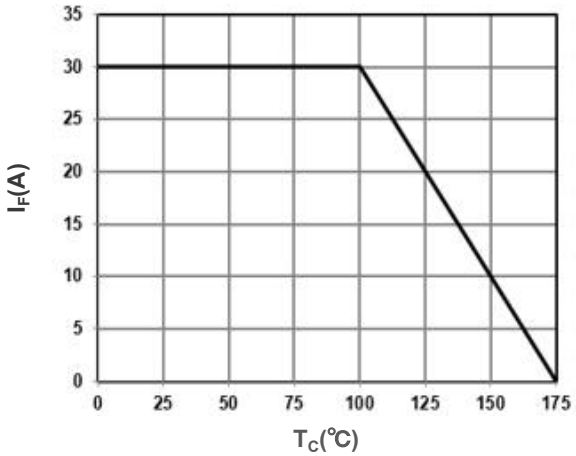
Characteristics Curves



Forward Characteristics Per Die



Reverse Characteristics Per Die



Current Derating Per Die

TO-247L Package Dimensions

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	3.95	4.15	4.35
c	0.52		0.68	ΦP	3.40		3.80
D	20.70	20.80	21.30	ΦP1	7.00		7.40
D1	16.15		16.95	S	6.04	6.15	6.30
E	15.50	15.60	16.10				

