



RoHS Compliant

MM01J10A12U

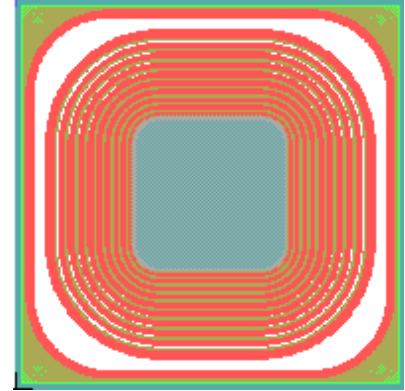
1200V 10A FRED

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
- PDP UPS
- Switching Power Supply
- Ultrasonic Cleaner
- Converter & Chopper



DIE SIZE: 3.018×3.018 mm

BONDING SIZE: 1.85×1.85 mm

DIE THICKNESS: 210 μm

TOP METAL: Al

BACK METAL: Ag

ABSOLUTE MAXIMUM RATINGS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Max.	Unit
V_R	D.C. Reverse Voltage		1200	V
V_{RRM}	Repetitive Reverse Voltage		1200	V
$I_{F(AV)}$	Average Forward Current	$T_C=110^{\circ}\text{C}$, Duty=0.5	10	A
$I_{F(RMS)}$	RMS Forward Current	Square wave, Duty=0.5	20	A
I_{FSM}	Non-Repetitive Surge Forward Current	$T_J=45^{\circ}\text{C}$, 8.3ms	73	A
T_J	Junction Temperature		-55 to +175	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range		-55 to +175	$^{\circ}\text{C}$

ELECTRICAL AND THERMAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{RM}	Reverse Leakage Current	$V_R=1200\text{V}$, $T_J=25^{\circ}\text{C}$	--	--	100	μA
		$V_R=1200\text{V}$, $T_J=125^{\circ}\text{C}$	--	--	500	μA
V_F	Forward Voltage	$I_F=10\text{A}$, $T_J=25^{\circ}\text{C}$	--	2.6	3.2	V
		$I_F=10\text{A}$, $T_J=125^{\circ}\text{C}$	--	2.2	--	V
t_{rr}	Reverse Recovery Time ($I_F=1\text{A}$, $V_R=30\text{V}$, $di_F/dt=-200\text{A}/\mu\text{s}$)		--	20	35	ns
t_{rr}	Reverse Recovery Time	$I_F=1\text{0A}$				
Q_{rr}	Reverse Recovery Charge	$V_R=400\text{V}$				
I_{RRM}	Max. Reverse Recovery Current	$di_F/dt=-200\text{A}/\mu\text{s}$				
		$T_J=125^{\circ}\text{C}$	--	210	--	ns
		$T_J=125^{\circ}\text{C}$	--	750	--	nC
		$T_J=125^{\circ}\text{C}$	--	7	--	A

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